



Simple. Smart. Solutions.

Your guide to underfloor heating

A smarter way to heat a home

Whether you are building a new home, renovating existing space or adding a new extension, Speedfit Underfloor Heating has a range of solutions suitable for any project.

At Speedfit Underfloor we like to keep it simple. We have put together this guide to help you understand our solutions. Here you will find useful information from key system components to pipe layouts, smart controls and how to request a free CAD drawing or place an order.

Speedfit Underfloor is committed to developing energy efficient heating solutions using the latest technologies and quality products, making it the ideal choice if you are looking for stylish, affordable and easy to install heating solutions.

With the largest network of technical sales engineers in the UK, our experts are on hand to provide you all the support you need – before, during and after install.



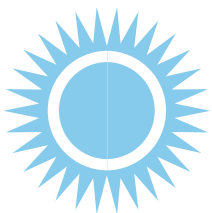
Contents

■	Reasons to install Speedfit Underfloor Heating	3
■	What makes us different?	5
■	Working together	7
■	UFH explained	11
■	Key components	13
■	Choosing the right system	14
■	Pipe layout	17
■	Smart control on the move	19
■	Speedfit Support	21
■	Designing & pricing	22



Reasons to install Speedfit Underfloor Heating

At Speedfit we make underfloor heating simple, offering high quality solutions underpinned by unrivalled technical support throughout the UK. Not only does Speedfit Underfloor Heating create a better use of space, it is also more efficient and kinder to the environment.



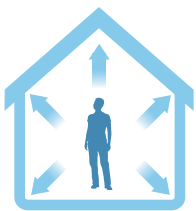
More comfort

Like The Sun, UFH uses radiant heat to warm objects and the fabric of the building to create a cosy, comfortable environment.



Greater heating control

Creates the perfect comfort zone with individual or multi-room temperature control - simple, standard and smart solutions.



More living space

By removing bulky and unsightly radiators it will free up wall space and give freedom for interior design.



Healthy & safe living

Less moisture and lower air movement may help reduce dust allergens. Plus with no hot radiators and sharp edges it creates a safer space.



Reduced heating bills

Designed to work with low water temperatures, Speedfit Underfloor Heating can reduce energy consumption and heating costs.



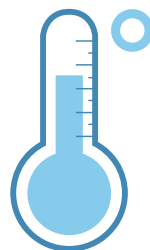
Renewable heat source

Compatible with conventional and renewable heat sources that reduce environmental impact and cut fuel bills, including air and ground source heat pumps and solar panels.



Less noise

Create a relaxing and tranquil ambience with no more creaking pipes or water flow noise. Virtually silent to run.



Universal control

Enable multi zone heating throughout the property by combining Speedfit Underfloor with JG Aura TRVs on existing or new radiator systems.

■ Did you know?

Underfloor heating is cheaper to run than radiators as it uses less energy, saving money on energy bills. By only heating rooms that are in use, you will conserve energy and reduce wastage too.

What makes us different?

JG Speedfit Underfloor Heating is committed to developing energy efficient heating solutions. Bringing together the best and latest technologies, we provide design-lead solutions underpinned with unrivalled technical support.

With you every step of the way

We give you all the help and support you need - before, during and after installation. Whether your project is small, big or complex, we offer a free design, estimation and technical support service. With our experience, you can be assured that our experts will design the most energy efficient solution. Once you have placed your order we will produce easy to follow CAD drawings.

Save time and money with easy fit systems

By combining our push-fit technology with ultra flexible JG Layflat® pipe, pipe fixing systems and pre-assembled manifolds, we offer a comprehensive range of underfloor heating systems that are quick and easy to install. Plus our 15mm pipe also reduces waste as any overcuts can be used on your next plumbing job.

JG Aura: a smarter way to control heat

At the heart of our heating control concept is our unique 4-in-1 thermostat for the remote regulation of underfloor heating, radiators and hot water. With individual and multi-room control, heating can be regulated from anywhere and at anytime using the free JG Aura App.

Universal heating control

We offer a wide range of underfloor heating solutions to suit any project type or size. Whether you are installing underfloor heating downstairs and radiators upstairs – or vice versa – you can combine Speedfit Underfloor Heating with JG Aura Wireless TRVs to enable full zonal control of both radiators and underfloor heating.

Unrivalled technical support

Although we are a global company we are still a family run business that understands the importance of serving local customers. Within the UK plumbing and heating market, we boast one of the largest technical sales teams providing onsite assistance for first time installers and helpdesk support for more seasoned installers.

Guaranteed to perform

All of our components are manufactured under the ISO9001 Quality Management System. Our quality assurance team stringently test them at every stage of production. Whilst we are confident you will not need to use your guarantee, we do provide:

- 25-year guarantee on all fittings and pipe with the Kitemark
- 5-year guarantee on JG Aura heating controls and TRVs
- 2-year guarantee on manifolds and control packs

■ Did you know?

A diverse range of industries rely on Speedfit Technology. So, whether you are driving a car, making a call, enjoying a pint at your local, or taking a shower, it is likely you have already come into contact with trusted Speedfit Technology.



Working together

With a strong brand reputation and high quality range of underfloor heating solutions – underpinned by an extensive support network – Speedfit Underfloor is the perfect partner for your next project.

Whether you are a contractor, developer, architect or self-builder, you can be confident we have the expertise to design the most energy-efficient solution for any budget, floor construction or project.





Contractors

We know that a good reputation is crucial to your business. With Speedfit Underfloor your reputation is in safe hands, as all of our products are manufactured to the highest standards using the latest technologies. We will be available throughout your project to provide you all the technical back up you could need – onsite or over the phone.

"The underfloor heating solution was easy to install and support from Speedfit was first class."

Richard Doyne,
Owner, Richard Doyne Plumbing & Heating

Architects & Developers

Free up space for design and add a touch of elegance to your next development with Speedfit Underfloor. We understand detail is important, which is why our experts will work closely with you from discussing initial ideas through to planning, design and installation.

"Having worked with JG Speedfit for more than 10 years, we already knew that we were working with a proactive company."

Russell Dawkins,
Technical Manager, Crest Nicholson



Homeowners & Self Builders

Add luxurious heat and style to your home with our affordable, energy-saving underfloor heating solutions. Using the latest push-fit technology, Speedfit Underfloor Heating is fast and easy to install. When designing and installing your solution, our technical team will help you eliminate any guesswork and create the best solution for your home.

"I wanted to create a warm and inviting space and that's exactly what I got with Speedfit UFH."

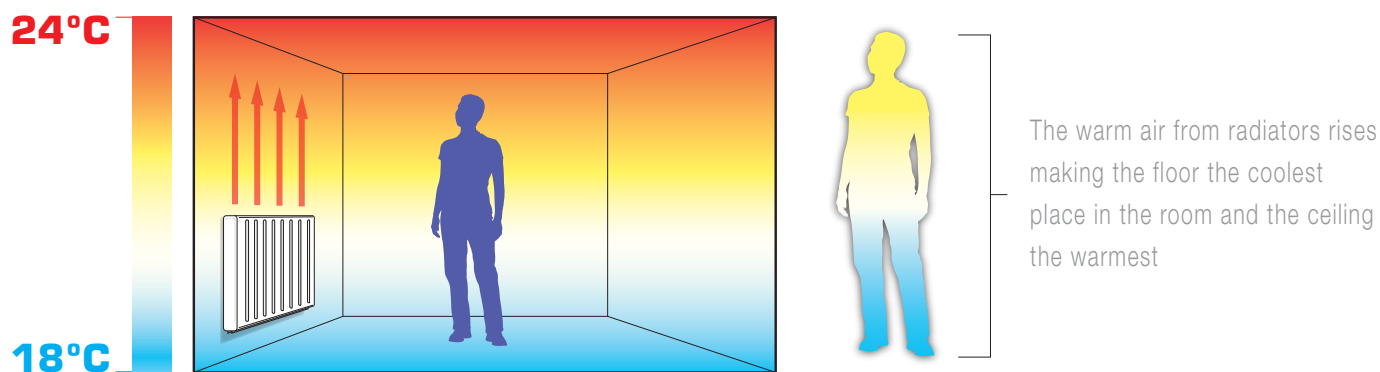
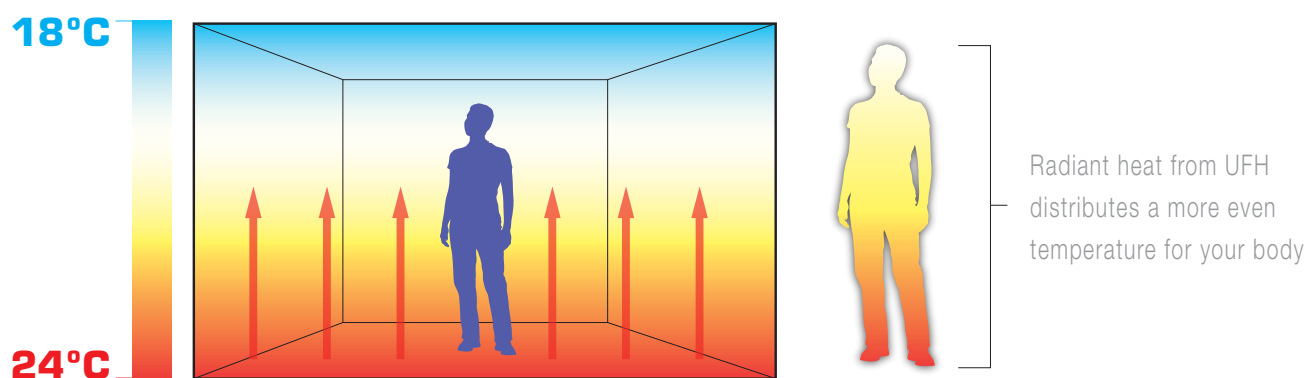
Mandy Stamp,
Homeowner



UFH explained

Speedfit Underfloor Heating uses mainly radiant heat, the most comfortable form of heating, giving an even distribution of warmth over the whole room. By contrast, radiators transfer energy using convection, heating the air above and around the radiator at a much higher temperature, causing the warm air to rise. This results in the floor being the coolest place in the room, with the mass of warm air at ceiling level. Underfloor heating resolves this issue by ensuring there are no more cold spots and that heat is distributed evenly where it is needed most.

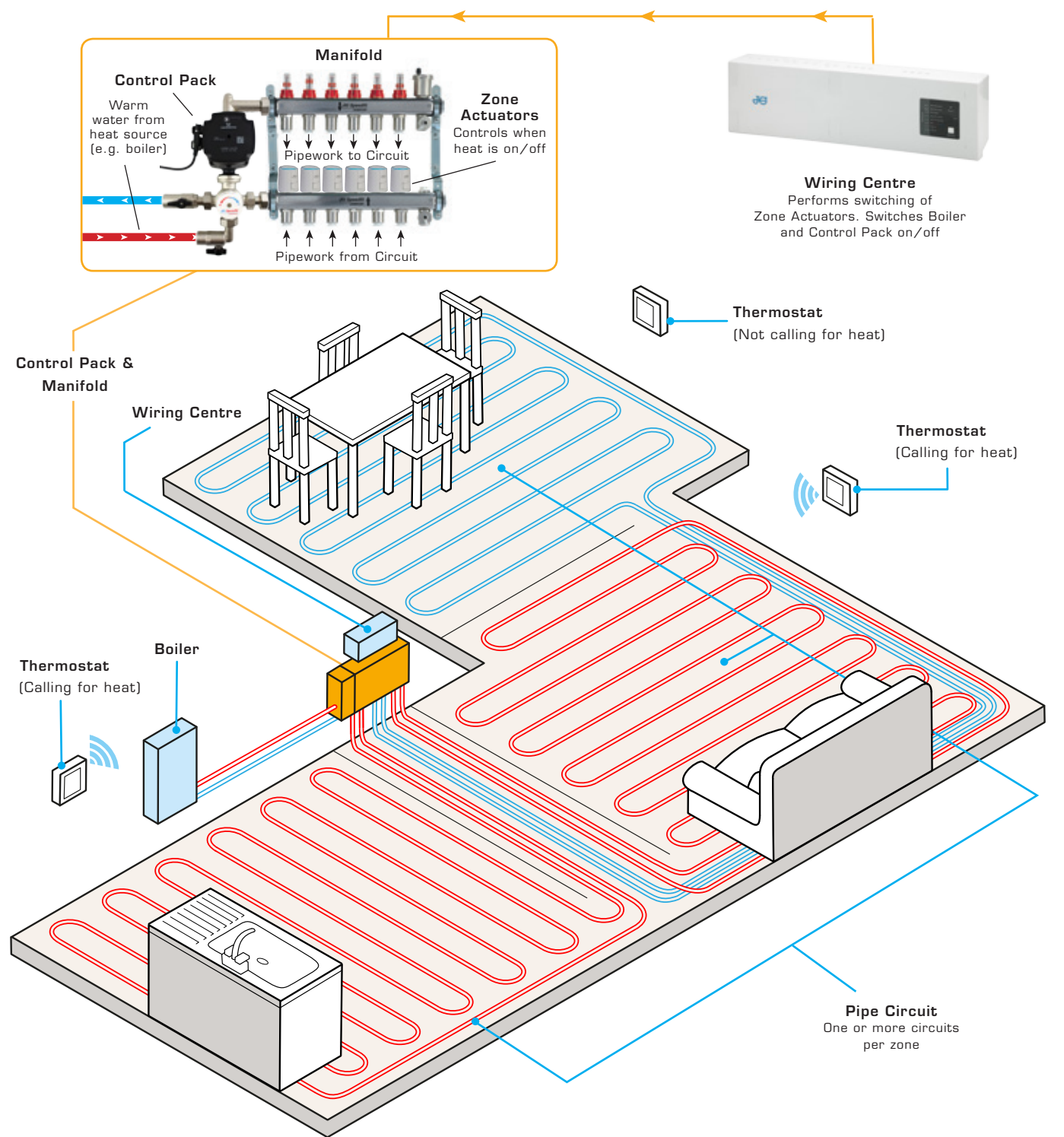
A conventional radiator can be as hot as 75°C, whilst an underfloor heating system has a much lower and safer surface temperature between 25-27°C.



■ Hints & Tips

Heat Output Tables and more technical information can be found at speedfitUFH.co.uk

Underfloor heating systems monitor individual room temperatures by using intelligent thermostats to send signals to the central wiring centre. The wiring centre controls the manifold which turns the boiler on and sends heat to the room when required. The manifold is able to blend water to the temperature needed for underfloor heating, which means any heat source can be used including conventional boilers or ground/air source heat pumps.



Control Pack & Manifold

Warm water is pumped from the heat source to the control pack and mixed to approx 50°C. The control pack is fitted to the manifold that connects to the pipe circuits.

Thermostats

Individual room thermostats control when heating is required in each room, as well as the temperature required in each room.

Wiring Centre

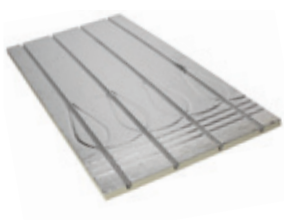
Performs central switching of zone actuators, control pack and boiler as signalled by the thermostats.

Pipe Circuit

When heat is switched on the entire floor area is warmed to between 25°C - 28°C, providing even distribution of heat at slightly higher than room temperature.

Key components

All Speedfit Underfloor Heating systems are supplied to specification and consist of high quality and dependable components.



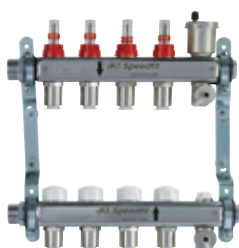
Pipe fixing flooring solutions

No matter what type of floor or space you are working with we have a wide range of floor solutions offering great heat distribution. All of our pipes fixing systems use ultra flexible JG Layflat® pipe and connect to the manifold using our trusted Speedfit push-fit fittings, making installation quick and easy. See following page for list of options.



Barrier pipe

JG Layflat® pipe is made from a soft material with little memory, making it ideal for laying underfloor heating pipe circuits. Made from Polybutylene, the 15mm pipe has an inner barrier to stop the ingress of oxygen molecules and is approved by British Gas for water pipe in vented and sealed central heating systems. Available in up to 300m coils.



Manifold

Manufactured to the highest standard, our manifolds are made from stainless steel and are available in a range of sizes from 2 to 12 zones. All manifolds come fitted with brackets and a vibration isolation mount. A unique feature is that pipe connections are all made with easy to use Speedfit push-fit fittings. Integrated within the manifold rail is a pre-assembled automatic air vent, filling valve and flow rate indicators for adjusting flow and isolating the pipe circuit.



Actuator valves

Controlled by a thermostat or programmer, Actuator valves operate to open or close an individual circuit on the manifold.



Control pack

Used to mix and control water temperature, Speedfit's lightweight control pack is suitable for heating systems up to 14kW and connects directly to the manifold without the need of extra brackets or support. The nickel-plated control pack consists of a mixing valve, Grundfos A rated pump, return elbow, manifold adaptor and all necessary seals. Speedfit push-fit pipe connections can be made from the side or below the manifold. The pack also isolates all system components for maintenance purposes and can be mounted either side of the manifold to suit application.



Heating control

JG Aura's unique 4-in-1 thermostat enables remote regulation of underfloor heating, radiators and hot water. We have a wide range of options from easy to use 230v dial thermostats to wireless programmable devices that can be controlled by your smartphone or tablet via the JG Aura App.

A full list of system components can be found at speedfitUFH.co.uk or in our [trade price list](#).

Choosing the right system

Different underfloor heating systems vary in performance, so it is important to choose the right system for your project. To decide which pipe fixing system is best, you need to consider how the floor has been constructed as well as the desired final finish.

A system for every floor construction

Screed floors and underfloor heating

Using thermal conductivity heat is transferred from pipes encased in screed to the finished floor level and are typically used for ground floor applications in new builds. Screed systems are constructed over slab or an oversite base with edge insulation fitted around the perimeter to allow for expansion and contraction as well as the prevention of heat conduction from the floor to the wall.

Timber floors and underfloor heating

15mm JG Layflat® pipe is installed into single or double grooved aluminium spreader plates that transmits heat evenly across the finished floor surface. For existing floor structures install between battens and for new floors fix between existing joists. If the floor can be raised, floors can also be counter-battened to make installation even easier.

Existing floors and underfloor heating

Laid directly on top of existing solid floors or under the floor between timber joists or over the floor between battens. There is a range of options for retrofits using low profile, high density, grooved foil-faced panels.

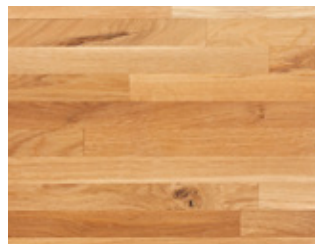
A system for most floor finishes

Some floor finishes offer better thermal conductivity than others and can therefore impact system performance.



Ceramic & Stone

Most ceramic and stone floor finishes have a low thermal resistance. The hard surface quickly and effectively transfers heat making it an ideal partner for underfloor heating.



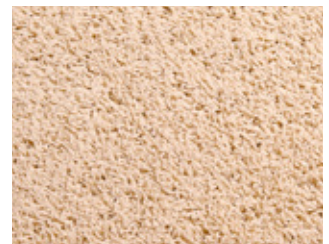
Timber Wood

Due to good heat transfer properties timber floors work well with underfloor heating, especially engineered timber. Temperature should not exceed 27°C and advice should be sought from your supplier.



Vinyl & Linoleum

Vinyl and linoleum flooring offers low resistance to heat due to its thin layer. Most types of vinyl and linoleum are suitable for use with underfloor heating but the temperature should not exceed 26°C.



Carpet

Carpets provide the highest heat resistance. Make sure the underlay is suitable for use with underfloor heating and the combined carpet and underlay tog value is less than 2.5. The higher the combined tog value the lower heat output.

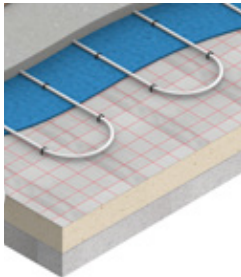
For most applications underfloor heating systems have a surface temperature of approximately 25°C. However, some situations - where building heat loss is high - will require a surface temperature of 29°C. Bathroom floors can with a suitable covering go to 33°C. Ensure the floor is designed not to exceed the temperature of the floor covering manufacturer's recommendations. All of the JG Aura thermostats accept the fitting of a floor probe to prevent overheating, and the wiring centres have connections built in for an overheat thermostat as standard.

A solution for any project

Our wide range of underfloor pipe fixing systems are designed to work with any type of floor construction.

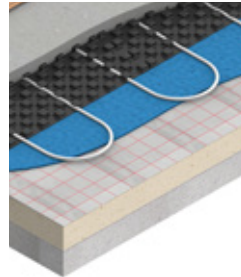
Screed floor solutions

A range of cost-effective solutions for installing pipes under new or concrete/screed floors. Ideal for new builds and extensions, especially ground floor level.



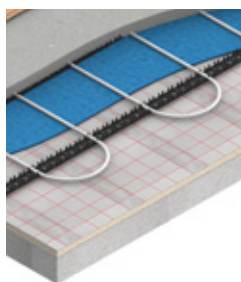
Staple

- Staples secure pipe to insulation
- Quick and easy to install
- Cost effective solution
- High heat output & response
- Regular and irregular shaped rooms



Floor Panel

- Simple grid system for precise layout
- Ensuring minimum pipe bending radius
- High heat output & response
- Good for larger regular shaped rooms

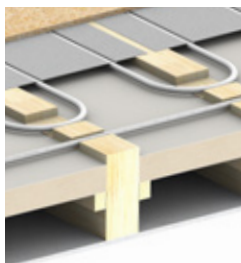


Mounting Rail

- Clip pipe onto the rail
- Ready-made spacing
- High heat output & response
- Good for larger regular shaped rooms
- Suitable when insulation is too thin for staples

Timber floor solutions

A range of solutions for installing between existing battens or new joists. Ideal for new builds, extensions and renovations, especially first floor level.



Spreader Plates from above

- Easy to install across timber joists or onto battens
- Medium heat output & response
- Low height build up
- Ideal for upper floor
- Good for rooms of all sizes
- Single or multi-room



Spreader Plates from below

- Suitable for use with pre-engineered joists
- Easy to install across timber joists or onto battens
- Media heat output & response
- Low height build up
- Ideal for upper floor
- Good for rooms of all sizes
- Single or multi-room

Existing floor solutions

A range of retrofit solutions for existing floors that provide no height build up and are suitable for ground or first floor installation.



Underfit[®]

- Easy to install grooved foil-faced panel
- Ideal for timber or suspended floors
- Medium to low heat output & response
- Low height build up
- Good for rooms of all sizes and shapes
- Single or multi-room



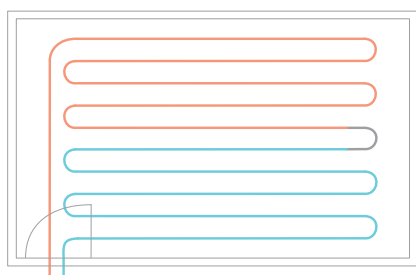
Overfit[®]

- Easy to install grooved foil-faced panel
- Lay over existing subfloor
- Suitable for lightweight floor coverings only
- Medium to low heat output response
- Low height build up
- Good for rooms of all sizes and shapes
- Single or multi-room

Pipe layout

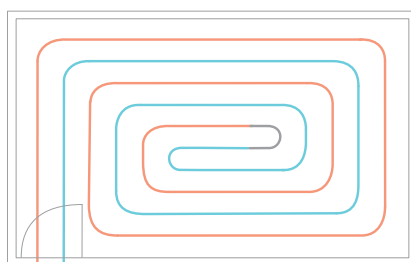
The manifold should be positioned in a central location to reduce the length of pipe runs required. There are several ways to lay pipe depending on pipe spacing, room layout and fixing method. If you have requested a CAD drawing this will show the specific pipe routes and patterns for the job. However, these examples show the main options available, although there are many possible combinations.

Serpentine pipe circuit



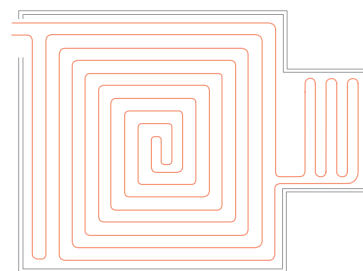
A simple up and down circuit pattern ideal for small areas or irregular shaped rooms such as kitchens and utility rooms.

Counterflow pipe circuit



A spiral circuit pattern that achieves an even floor temperature with alternating flows and returns.

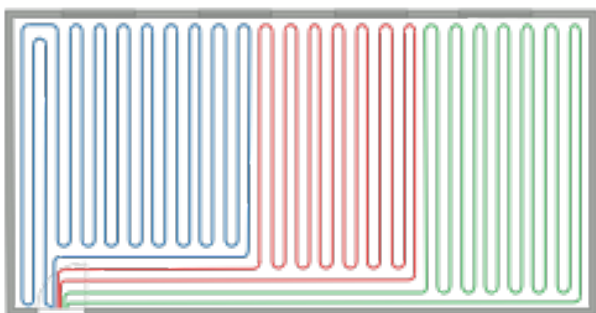
Combining pipe circuits



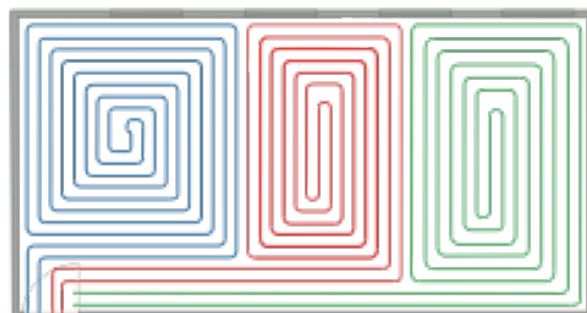
Serpentine and Counterflow pipe circuits can be combined in irregular shaped rooms.

Multiple pipe circuits

For more complex installations in rooms requiring multiple circuits, you can use both Counterflow and Serpentine layouts.



Serpentine



Counterflow

What pipe layout should you use?

System	Serpentine	Counterflow
Staple	✓	✓
Mounting Rail	✓	
Floor Panel	✓	✓
Spreader Plates from above	✓	
Spreader Plates from below	✓	
Underfit [®]	✓	
Overfit [®]	✓	
Room Pack		✓



Smart control on the move

With JG Aura you will never have to worry about returning home to a cold house or forgetting to turn off your heating when you leave. Plus, with our smart generation thermostats you get the freedom to control your heating and hot water no matter where you are via smartphone or tablet.

Add a touch of style to the way heating is regulated with our sleek and slender thermostats. Available in black or white, our contemporary heating controls will complement the look of any room. Whether you are looking for wired, wireless or networked controls, we have a range of options to suit your needs, which are quick and simple to set up and program.

Wireless system **Digital wire free or hard-wired thermostats**

Create a heating control network using JG Aura Wireless Thermostats. Battery powered thermostats give you the flexibility of a wire free installation and are ideal for retrofitting without the need to disturb walls. Alternatively, our 230v mains powered option require no batteries and enhance the wireless communication signal as each thermostat acts as a repeater. You can also mix and match on the same network. When Internet-enabled, controls require no maintenance as they automatically update.

Wired system **Digital and dial thermostats**

JG Aura 230v system consists of touch sensitive 4-in-1 controls as well as easy to use Dial Thermostats. These can be used as individual thermostats or combined into groups for convenience.

Taking JG Aura to the next level **JG Aura Wireless TRV**

Are you looking for underfloor heating downstairs and radiators upstairs, but need individual room control throughout? By combining Speedfit Underfloor Heating with JG Aura Wireless TRVs, you can now achieve individual room control throughout.

A full list of system components can be found at speedfitUFH.co.uk or in our [trade price list](#).



Download the free App



iOS



The JG Aura App is compatible with iOS, Android and Windows devices



■ Hints & Tips

Our controls are pretty intuitive, but if you need extra help programming or setting them up check out our online video tutorials and guides, at speedfitUFH.co.uk



Speedfit Support



With Speedfit Support you can be confident you will get all the technical backup you could need - before, during and after install.



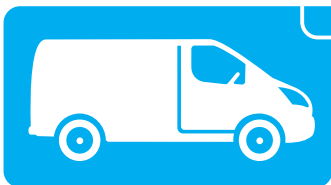
Instant estimate

Price jobs on the spot with our online estimator. Get an instant estimate and full bill of materials for floor applications up to 150m².



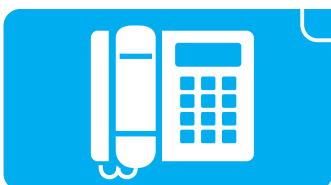
Free design with detailed estimate

With our vast experience and expertise, you can be assured that we will design the most energy efficient solution for your project. Boasting one of the fastest turnaround times in the industry, our team will provide you with a detailed estimate and free CAD design package.



Support on your doorstep

With the largest network of technical sales engineers in the UK – who are qualified plumbers and UFH design engineers – our national team of experts provide free onsite technical support for first time installers*.



Technical helpline

Got an enquiry or need help with an issue? Speedfit Underfloor Heating experts are only a phone call away.



Handy installation videos & guides

From step-by-step installation videos to quick reference guides, you will find everything you need to make installation easy and get the most out of Speedfit Underfloor Heating.

*Onsite support is not available for Room Pack installations. However, engineers and helpline advisors are always on hand to assist.

Designing & pricing

Need help or support?

Our team of Area Sales Managers and Technical Sales Engineers are on hand to help you choose the best system for your project. Visit speedfitUFH.co.uk and use our handy locator tool to find your nearest contact.

Want to place an order?

Speedfit Underfloor Heating is available in more plumbing & heating merchants and builders' merchants than anyone else, including leading DIY stores. Placing an order is simple:

- Take your Estimated Materials List to your stockist of choice
- Negotiate and agree a discount on the trade list price quoted
- Place your order at your stockist

If you need advice on stockists or discounts please call your local Speedfit Area Sales Manager, as detailed on your quote.

Get a free CAD drawing

CAD drawings can be requested once you place your order with your local Speedfit Area Sales Manager or Technical Sales Engineers. To speak to our CAD centre call 01895 425365 or send your plans to:

Speedfit CAD Centre

Unit 2 First Floor, Greenways Business Park, Bellinger Close
Chippenham SN15 1BN

John Guest Speedfit Limited

Horton Road, West Drayton, Middlesex UB7 8JL

