



UNDERFLOOR

THE PUSH-FIT SOLUTION FOR UNDERFLOOR HEATING



Includes this NEW addition:

 ***Layflat Pipe***
Installing pipe just got a lot easier.

Underfloor Heating Systems

JANUARY 2014

John Guest - Worldwide Connections

Pages 4 and 5



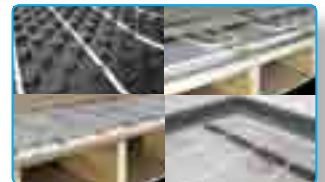
Introduction to Underfloor Heating

Pages 6 to 9



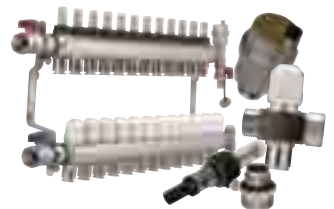
JG System Selector

Pages 10 and 11



System Components and UFH Spare Parts

Page 12



NEW Pipe

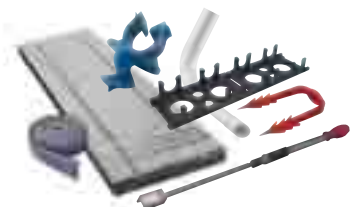
Introducing JG Layflat Pipe.

Page 13



Fixing Systems

Pages 14 and 15



Pipe Installation

Pages 16 to 23



Underfloor Heating for Conservatories and Extensions

Single Room Control Units, Underfloor Heating Packs - everything you need to install a system of up to 30sqm.

Pages 24 and 25



Mains Voltage Electrical Control System

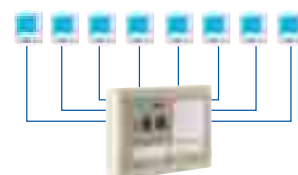
Slimline and attractive components with a Touch Screen Time Clock and a choice of room thermostats.

Pages 26 and 27



Low Voltage Network Control System

Pages 28 to 31



Touchpad Central Controller Option

Control up to 32 thermostats from one central location using easy touch screen control.

Pages 32 and 33



Wireless Control System

Slimline and attractive components which are easy to install and reliable with upgrade options.

Pages 34 and 35



Speedfit Support

An introduction to Speedfit's technical support package.

Pages 36 and 37



Energy Saver System

A complimentary radiator system with individual zone control.

Pages 38 and 39



Worldwide Connections

The John Guest Group has a long established reputation as a world leading manufacturer of push-fit fittings, tube and other fluid control products. A reputation built on producing consistently high quality products with an ongoing commitment to value engineering and product development.



Quality Manufacture

A commitment to quality is at the heart of the John Guest Philosophy

The strictest control is maintained by virtue of the fact that design and manufacture is carried out in modern purpose built manufacturing centres in west London and at Maidenhead in Berkshire.

Maintaining control over the whole process from initial tool design and tool making through to final assembly and testing ensuring that only products of the highest quality are produced.

The company believe it is this commitment to quality that has led to it receiving prestigious awards from many of the world's leading testing and approvals organisations.

John Guest is a preferred supplier to many international companies.



British Gas
Service

WRAS
APPROVED
PRODUCT



kiwa
Speedfit PEX Fittings
and Barrier Pipe.
K24076, K24077 and K24078

benchmark
The code of practice for the installation,
commissioning & servicing of gas fires and wall heaters



The Speedfit System for Underfloor Heating has been designed to be as quick and easy as possible to install with component parts manufactured under an ISO9001 Quality Management System.

The System has water pumped from a boiler or other heat source to a pump pack where it is mixed to approximately 50°C then distributed via a manifold to heating circuits made using Speedfit

Barrier Pipe. The temperature and volume of water is altered to maintain the requirements of the system.

The pipe is laid in concrete or suspended just below the surface of timber flooring.

A wide range of electrical components means the system can have as much or as little control as required.



Design Service and Technical Support

CAD Design Service

Members of the Technical Support Team are available to help you get the best from your Speedfit Underfloor Heating System.

To obtain an estimate send us a plan of the area where underfloor heating is required, indicating the preferred location of the manifold and intended floor construction.

An estimate will be prepared and when approved and an order placed, the Speedfit CAD Design Service will provide a detailed drawing showing pipe layout, flow rates, suggested zone temperatures and advice on commissioning.

A member of our national team of Technical Support Engineers will be available to offer on-site support during the installation process.

The JG Speedfit Technical Advisory Service is available to assist and advise on all aspects of using the Speedfit System. The service is available between 8.00am and 5.00pm Monday to Friday.

Technical Help Desk:
01895 425333



Underfloor Heating

Underfloor heating provides the most comfortable, even warmth of any heating system. It is economical to run and virtually maintenance free.

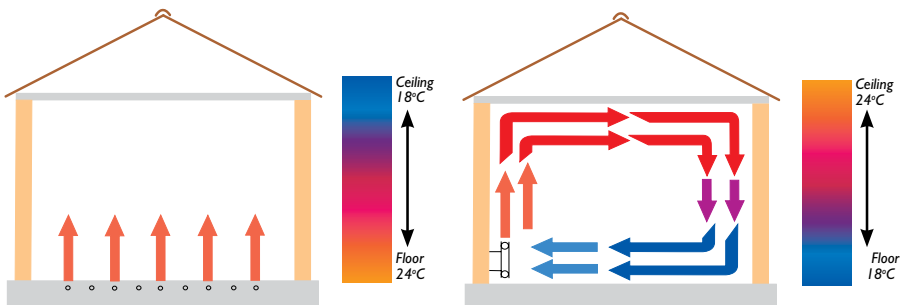
The Speedfit System has water being pumped from a boiler to a pump pack, where it is mixed to approximately 50°C then distributed via a manifold to heating circuits made using Speedfit Barrier Pipe. The pipe is laid in concrete or suspended just below the surface of the floor.

In concrete floors, the pipe is laid on insulation and then covered with a screed

which can be laid almost any type of floor covering.

For timber floors, spreader plates are laid between the joists and the floor decking or on the underside of the floor. Speedfit Pipe is pushed into the grooves on the plates.

The Floor area is typically warmed to between 25°C and 28°C, providing an even distribution of heat at only slightly higher than room temperature. The system is controlled by one or more thermostats which control the manifold and boiler as required.



The heat is concentrated where it is most needed for comfort and efficiency.

By contrast, radiators transfer heat from a relatively small area at a much higher temperature than the space being heated.

The radiator system heats mainly by convection. This results in the floor being the coolest place in the room, with the mass of warm air at ceiling level.



The Whole Floor Acts as a Heat Source

FEATURES & BENEFITS

The Speedfit Underfloor Heating System offers many benefits to the consumer. These include:

Efficiency Savings

Underfloor Heating Systems are designed to operate at lower temperatures than radiator systems, making them especially suitable for condensing boilers and heat pump. This results in reduced energy consumption and lower heating costs for the building.

Installation

It is simple to install, requiring the minimum of installation effort and little maintenance.

Comfort

The system uses mainly radiant heat, the most comfortable form of heating, giving an even distribution of warmth over the whole room.

Space

The system is unobtrusive and space saving which means every square metre of floor and wall space can be utilised giving freedom of interior design.

Noise

Compared to radiator systems the system is virtually silent running.

Reduced numbers of hot surfaces and sharp edges minimise risk of burns or injury.

Control

Underfloor heating is easy to control and unlike conventional radiator systems, makes use of multi-zoning so each room benefits from individual time and temperature control resulting in a more flexible heating system with lower running costs.

Environment

Underfloor heating is suitable for use with the most energy efficient and environmentally friendly heating systems including condensing boilers, solar power and heat pumps.

FLOOR FINISHES AND COVERING

The Speedfit Underfloor Heating System is suitable for most floor finishes, including ceramic tiles, carpets, vinyl and laminate.

However, the thermal resistance of floor covering will have a marked effect on the performance of the heating system.

Advice on the use of floor coverings and their effect on the performance of a system is available from our Technical Help Desk.

For information on the effect of different floor finishes please refer to our website or UFH Technical Guide.

SET BACK - EXPLAINED

Compared to other forms of heating, underfloor heating can have a relatively slow response time, taking longer to heat up and cool down than radiator systems.

In order to reduce running costs and to have realistic heat up and cool down response times, rather than the system being switched off, the temperature setting is reduced by about 4°C. This is called set back because the system is turned down not off.

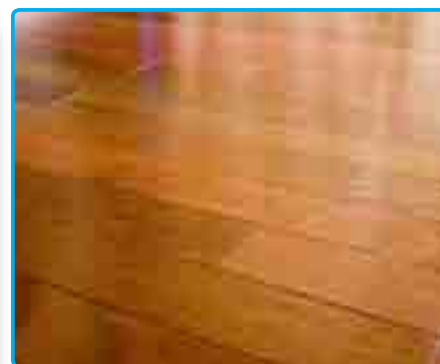
With the Speedfit System, set back can be achieved in two ways:

Individual Programming

Programmable Room Thermostats can be installed in each zone. They give individual time and temperature control, alternating between daytime and set back temperatures.

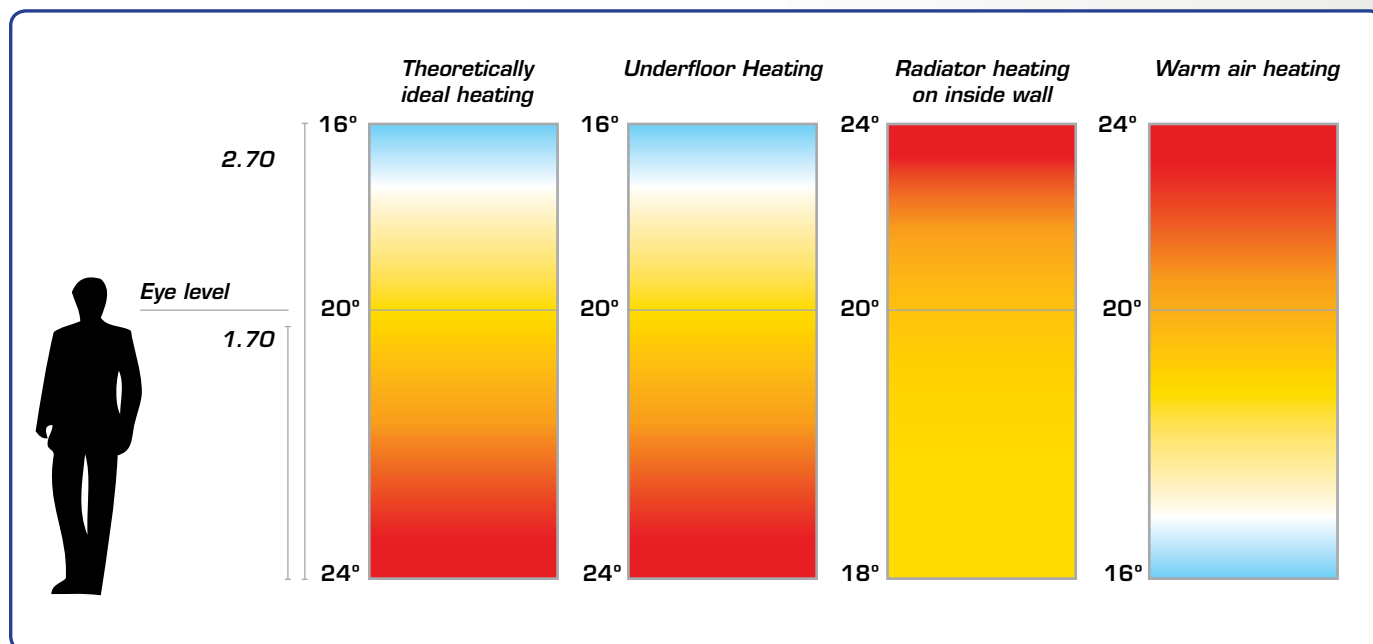
Centralised Programming

The Dial Set Back Room Thermostat has its own 'Daytime' and 'Set Back' time controlled centrally using a Touch Screen Time Clock.



Variety of Floor Finish Options

Underfloor Heating



As the chart above shows, people are more comfortable when their feet are in a warm area and their head is slightly cooler.

A system using radiators will have colder air at the bottom of a room which places your feet in the wrong place for comfortable living. This is because cold air is more dense (heavy) and it is pulled downwards by gravity.

In contrast, Underfloor Heating heats the whole floor. This means that the warmest space is the area nearest the floor, which matches the preferred heat profile.

In practice, normal comfort can be achieved at a lower air temperature than with conventional radiators because underfloor heating systems heat mainly by radiated energy, just like the energy from the sun.

Radiant energy is emitted by the floor giving an even distribution of heat. This means no cold spots, hot ceilings or cold feet.

In its simplest form, Underfloor Heating is pipes in the floor with blended water passing through them. The Speedfit Underfloor Heating System receives water from a heat source such as a boiler or heatpump and high temperature water from a source like a conventional boiler is then blended to reduce the flow temperature. It is then distributed via a manifold to heating circuits made up of Speedfit Barrier Pipe. Low temperature water, such as from a Heat Pump, may not need to be blended down.

The pipe is then laid in concrete or suspended under timber flooring. Effectively, the floor is turned into a large, low surface temperature heat emitter which is economical to run and provides a similar level of comfort, at 20°C, to a convection system providing an air temperature of 21° - 22°C.

Heating times and comfort temperatures are controlled by individual thermostats to enable the user to maximise flexibility and reduce running costs.



JG System Selector

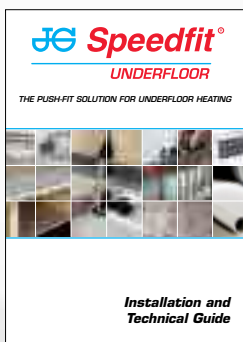
The JG Speedfit Underfloor Heating system offers a range of products to ensure that a wide variety of project types and sizes can be catered for.

This flow diagram helps portray the various choices that are available depending on whether a screeded or dry system is to be used. The 3 thermostat systems are sure to enable the right heating control method for most project requirements.



JG Speedfit UFH Systems

The Speedfit System for Underfloor Heating has been designed to be as quick and easy as possible to install with component parts manufactured under an ISO9001 Quality Management System. For more information please visit www.speedfitUFH.co.uk.



The JG Installation and Technical Guide is supplied with every Speedfit Underfloor System.

Alternatively scan the QR code below to obtain a Pdf version of the document.



Room under 30sqm / Extensions

The Speedfit Underfloor Heating Control Unit is the ideal way to provide heating to a conservatory or room extension up to 30sqm. The unit is pre-assembled and pre-wired to allow for a fast and simple installation. It can be plugged into any convenient electrical socket or spur. Designed to be easily integrated into an existing central heating system and fitted with the latest A rated pump.



Screeded Systems

The Scream should be laid as soon as possible after the pressure test and the system should be left under pressure during the screeding process. Cement, sand and fine concrete screeds should be designed and laid to the recommendations in BS 8204.



Dry Systems

These systems offer a variety of solutions for New Build or Retrofit projects. They can be used over an existing solid or wooden floor to give a low build installation as well as between solid or manufactured joists to provide a discreet UFH system for first floor applications.



Controls

An appropriate allocation of heating thermostats will be required on all underfloor heating systems. JG Speedfit offer three systems to choose from; Network, Mains Voltage and Wireless.



20sqm Room Pack

JGUFHPACK20/2 Pack contains:

- 1 x 15mm x 150m Coil JG Layflat Pipe
- 1 x Single Room Control Unit with A rated Pump
- 1 x Programmable Room Thermostat
- 200 x 15mm Pipe Clips
- 2 x 15mm Pipe Inserts



30sqm Room Pack

JGUFHPACK30/2 Pack contains:

- 2 x 15mm x 100m Coil JG Layflat Pipe
- 1 x Single Room Control Unit with A rated Pump
- 1 x Programmable Room Thermostat
- 300 x 15mm Pipe Clips
- 8 x 15mm Pipe Inserts
- 2 x 15mm Speedfit Equal Tees
- 2 x 15mm Speedfit Swivel Elbows



Wireless 30sqm Room Pack

JGUFHWPACK30/2 Pack contains:

- 2 x 15mm x 100m Coil JG Layflat Pipe
- 1 x Single Room Control Unit with A rated Pump
- 1 x Wireless Programmable Room Thermostat
- 1 x 2 Zone Wireless Receiver
- 300 x 15mm Pipe Clips
- 8 x 15mm Pipe Inserts
- 2 x 15mm Speedfit Equal Tees
- 2 x 15mm Speedfit Swivel Elbows



Staple System

This system is quick to install, cost effective, and can be easily adaptable to irregular room shapes. Floor coverings can be laid when the screed is fully cured.



Clip Rail System

Using the screed as a heat diffuser, Speedfit Pipe is secured to 'Clip Rails' on top of rigid insulation which is placed over the concrete sub-floor.



Floor Panel System

Speedfit Floor Panels make a simple grid to ensure quick and easy pipe laying and also provide a precise guide for the pipe, ensuring that minimum pipe bending radius is achieved.



Spreader Plates from Above

JG Speedfit's plate system is designed for use in timber suspended or battened floors. The floor system uses aluminium single or double spreader plates to transmit the heat evenly across the finished floor surface.



Spreader Plates from Below

JG Plate from below system is intended for use with modern pre engineered joists. As modern joists rely on the floor above being bonded and screwed to the joist's top surface.



Overfit System Underfit System

JG Overfit is a low profile System for new build or renovation projects. It's a lightweight insulated panel with compressive strength intended for lightweight floor coverings. The Underfit System is a grooved insulation panel for installing pipe over existing floor structures (between battens) or under the floor (between existing joists). It's a suitable choice for both new build and renovations.



230v Solutions

230v hardwired controls with Dial Thermostat has the option of setback switching to give an energy saving High / Low temperature switching rather than the On or Off approach.



Network Solutions

Hardwired system requiring Network cabling to Thermostats and offering centralised control. It utilises Programmable Room Thermostats in push-button or Touchscreen versions.



Wireless Solutions

A range of Wireless PRT controls married to our 8 zone wiring centre for those buildings where running cables for the thermostats is difficult or inconvenient.

System Components

MANIFOLDS - STAINLESS STEEL



Part No.	Description
JGUFHMAN2/2	2 ZONE MANIFOLD
JGUFHMAN3/2	3 ZONE MANIFOLD
JGUFHMAN4/2	4 ZONE MANIFOLD
JGUFHMAN6/2	6 ZONE MANIFOLD
JGUFHMAN8/2	8 ZONE MANIFOLD
JGUFHMAN10/2	10 ZONE MANIFOLD
JGUFHMAN12/2	12 ZONE MANIFOLD

JG Speedfit Manifolds are manufactured from stainless steel to the highest standards.

A unique feature is that connections to the heating pipes are Speedfit Push-fit, offering much reduced installation time. All manifolds are pre-fitted with brackets, vibration isolation mounts, and an automatic air vent. Flow rate indicators include the means to adjust flow rate and isolate circuit. Can be assembled to suit left or right hand supply depending upon project type.

CONTROL PACK - NICKEL PLATED



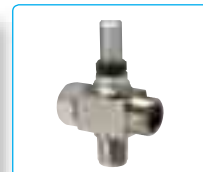
NEW
A RATED
PUMP

Part No.	Description
JGCONTROL/3	CONTROL PACK

A compact, modular control pack for underfloor heating systems up to 14kW. Designed to be lightweight in order to connect directly to Speedfit manifolds without the need for extra brackets or support. The nickel plated material matches the stainless JG Speedfit Manifold.

Pack consists of a mixing valve, circulating pump, return elbow, manifold adaptor and all necessary seals.

MANIFOLD EXTENSION KIT - NICKEL PLATED



Part No.	Description
JGUFHMANEXT/2	MANIFOLD EXTENSION KIT

Nickel Plated and allows a manifold to be extended by one or more zones.

MANIFOLD ELBOW CONNECTOR - NICKEL PLATED



Part No.	Description
JGUFHMANELB/2	MANIFOLD ELBOW CONNECTORS

Nickel Plated and enables a pump pack and manifold to be installed at 90°C to each other.

Underfloor Heating Spare Parts

MANIFOLD BALL VALVE



Part No.	Description
SPUFH7	Manifold Ball Valve - RED

MANIFOLD BALL VALVE



Part No.	Description
SPUFH7	Manifold Ball Valve - BLUE

DRAIN/FILLING VALVE



Part No.	Description
SPUFH9	Drain/Filling Valve

MANIFOLD FLOW METER



Part No.	Description
SPUFH10	Manifold Flow Meter

MANIFOLD ISOLATING VALVE



Part No.	Description
SPUFH11	Manifold Isolating Valve

UFH AIR VENT



Part No.	Description
SPUFH13	UFH Air Vent

PTFE WASHER



Part No.	Description
SPUFH14	PTFE Washer

SERVICE KIT



Part No.	Description
SPUFH15	Service Kit - JGCONTROL2

SERVICE KIT



Part No.	Description
SPUFH16	Service Kit - JGROOMPACK

CONNECTION BOX



Part No.	Description
SPUFH17	Connection Box - Stat

Pipe

Layflat Pipe

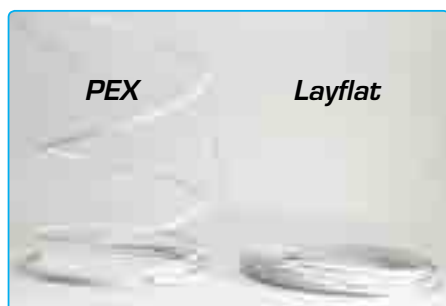
LAYS FLAT - STAYS FLAT - ULTRA FLEXIBLE

The polybutylene pipe is made from a soft material with little memory ensuring a very flexible system. It has an inner barrier to stop the ingress of atmosphere. British Gas accepted for water pipe in vented and sealed central heating systems.

JG LAYFLAT® POLYBUTYLENE BARRIER PIPE



Part No.	Description	Size
15BPB-50C	BARRIER PIPE	15MM X 50M
15BPB-100C	BARRIER PIPE	15MM X 100M
15BPB-120C	BARRIER PIPE	15MM X 120M
15BPB-150C	BARRIER PIPE	15MM X 150M

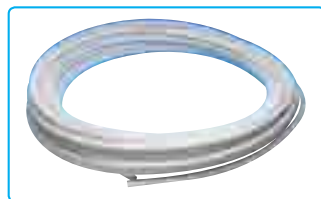


Easy to Handle



Ultra Flexible

SPEEDFIT PEX BARRIER PIPE



Part No.	Description	Size
15BPEX-50C	BARRIER PIPE	15MM X 50M
15BPEX-100C	BARRIER PIPE	15MM X 100M
15BPEX-120C	BARRIER PIPE	15MM X 120M
15BPEX-150C	BARRIER PIPE	15MM X 150M

Fixing Systems

PIPE STAPLES



Part No.	Description
JGUFHGUN	STAPLE GUN
JGUFHSTAPLE	PIPE STAPLES

Pipe Staples are barbed to ensure a secure fixing to the insulation. Easy fixing is carried out by using a Staple Gun, securing the pipe to the insulation with an easy repeatable action. 1 box per 20m².

CONDUIT ELBOW



Part No.	Description
JGUFHCONELB	CONDUIT ELBOW

MOUNTING RAIL



Part No.	Description
JGUFHRAIL	2 METRE LONG
JGUFHPIN	RAIL PINS FOR ABOVE

Mounting Rails offer a quick installation of 15mm pipe, supplied 2 metres long, the rails are pre scored every 100mm for easy cutting. The rail can be secured using red Rail Pins. 1 pack per 20m².

EDGE STRIP



Part No.	Description
JGUFHEDGE	25 METRE ROLL

Used with solid (screeded) floors, Edge Strip is used around the edge of a room to provide an expansion gap for the solid floor as it heats up and cools down.

FLOOR CLIP



Part No.	Description
JGUFHCLIP	FLOOR CLIP
JGUFHTOOL	FOR EASY FIXING OF FLOOR CLIPS

Floor Clips screw easily into the insulation to retain 15mm pipe, they are best installed using a Fixing Tool.

ACTUATOR VALVE



Part No.	Description
JGUFHA(240 v)/2	240 v CIRCUIT ACTUATOR VALVE

Controlled by a thermostat or programmer, Actuator Valves operate to open or close the flow of water to an individual circuit on the manifold.

OVERFIT® BOARD - OVER FLOOR



Part No.	Description	Size
JGUFHBOARD1	OVERFIT BOARD	1250MM X 600MM

Low profile system for new build or renovation projects. Grooved foil faced insulation panel for installing 15mm tubing over existing floor structures to facilitate the use of Underfloor Heating.

Recommended flow temperature 50 - 60°C
Maximum circuit length 100m
Typical cover per loop 13 - 15m²
Individual panel size 600 x 1250 x 25(mm)
Pipe spacing 150mm

Approx 7.5m² per box.

Heat output information available on page 39.

UNDERFIT® BOARD - JOISTS AND BATTENED FLOORS



Part No.	Description	Size
JGUFHBOARD2	UNDERFIT BOARD	1250MM x 350MM

Grooved foil faced insulation panel for installing 15mm tubing over existing floor structures (between battens) or under floor (between existing joints).

Recommended flow temperature 50 - 60°C
Maximum circuit length 100m
Typical cover per loop 15 - 20m²
Individual panel size 350 x 1200 x 50(mm)

Approx 4m² per box.

Heat output information available on page 39.

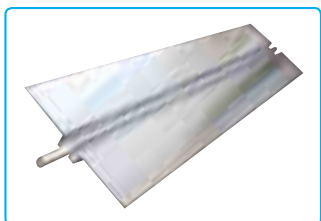
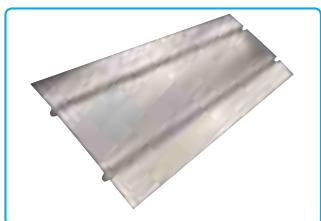
FLOOR PANELS



Part No.	Description	Size
JGUFHTILE	Floor Tile	1400MM X 800MM

Supplied in packs of 12, Speedfit Floor Tiles have an 11mm layer of insulation for support and additional thermal insulation.

SPREADER PLATES



Part No.	Description
JGUFHSP400	390MM X 1000MM
JGUFHSP250	390MM X 250MM
JGUFHSP165	165MM X 1000MM

Spreader Plates 390 x 1000mm and 390 x 250mm are laid across traditional joists and fixed in place using a hand stapler.

Spreader plates 165mm x 1000mm are designed to be used with composite joists and are fixed from below.

Speedfit Pipe is fixed in the grooves of the plates, insulation is placed in the void below the plates to minimise downward heatloss.

Above: approx 2 plates per 1m²

Below: approx 4 plates per 1m²

Heat output information available on page 39.

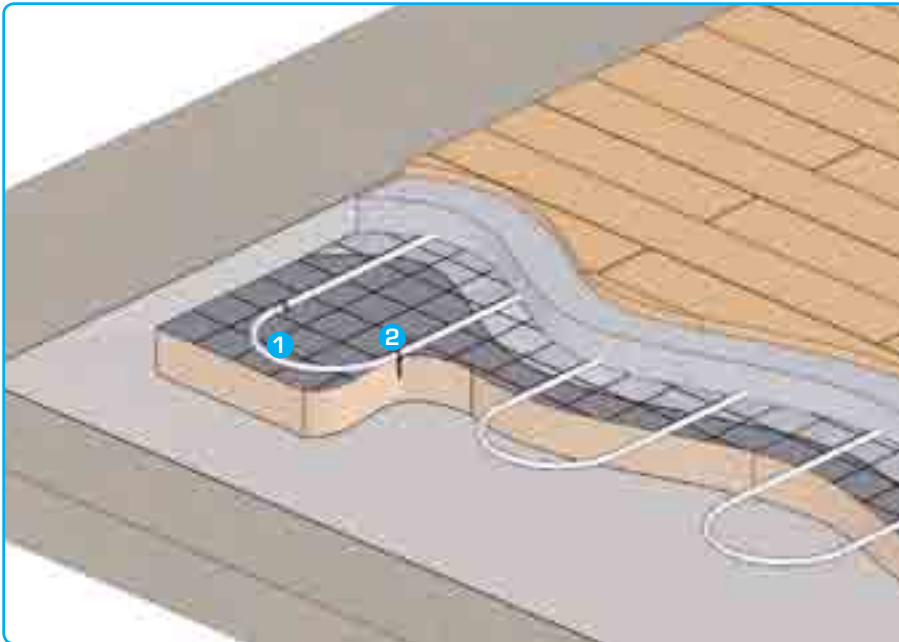


Pipe Installation - Solid Floors

THE UFH STAPLE SYSTEM

INSTALLING THE UFH STAPLE SYSTEM*

Using the screed as a heat diffuser, JG Speedfit pipe is secured with staples to rigid insulation placed over the concrete sub-floor. A variety of screeds can be used and are typically 65-75mm thick for sand-cement types or 40-50mm for liquid pumped screeds. The system is quick to install, cost effective, and can be easily adaptable to irregular room shapes. Floor coverings can be laid when the screed is fully cured.



- ① 15mm JG Layflat Pipe
- ② Pipe Staples

PRODUCTS ESSENTIAL FOR THIS INSTALLATION

PIPE STAPLES



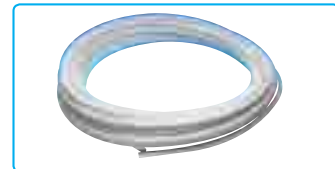
Part No.	Description
JGUFHGUN	STAPLE GUN
JGUFHSTAPLE	PIPE STAPLES

EDGE STRIP



Part No.	Description
JGUFHEDGE	25 METRE ROLL

JG LAYFLAT® POLYBUTYLENE BARRIER PIPE



Part No.	Description	Size
15BPB-50C	BARRIER PIPE	15MM X 50M
15BPB-100C	BARRIER PIPE	15MM X 100M
15BPB-120C	BARRIER PIPE	15MM X 120M
15BPB-150C	BARRIER PIPE	15MM X 150M

* For further information on installation methods refer to the JG UFH Installation and Technical Guide.

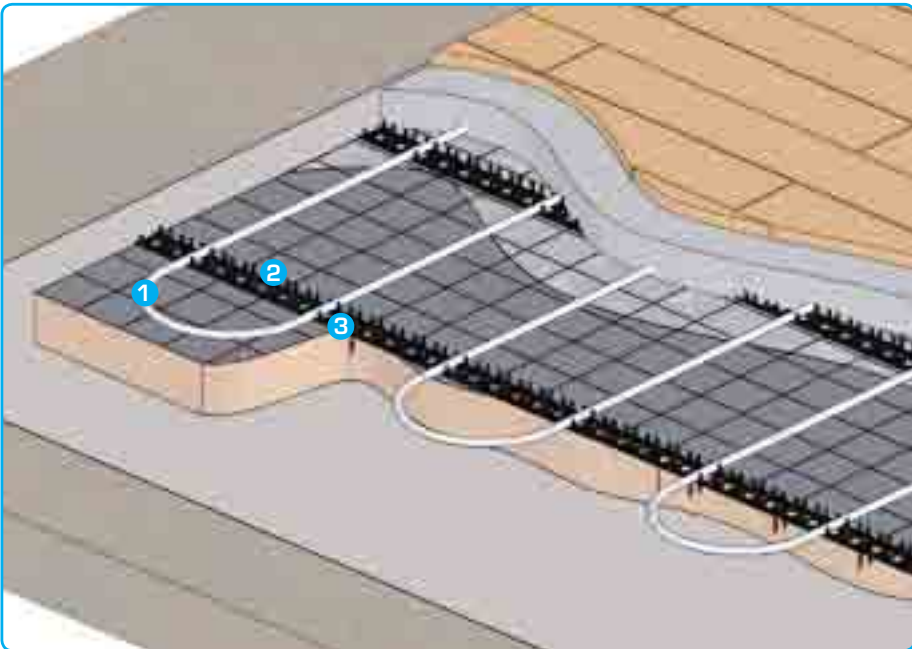


Pipe Installation - Solid Floors

THE MOUNTING RAIL

INSTALLING THE MOUNTING RAIL *

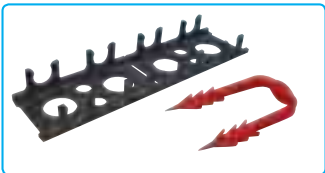
Using the screed as a heat diffuser, Speedfit Pipe is secured to 'Clip Rails' on top of rigid insulation which is placed over the concrete sub-floor. A variety of screeds can be used and are typically 65-75mm thick for sand-cement types or 40-50mm for liquid pumped screeds. The system provides ready made pipe spacing, can be fixed to insulation which is too thin for staples, and is especially suitable for large regular shaped areas. Floor coverings can be laid when the screed is fully cured.



- ① 15mm JG Layflat Pipe
- ② JG UFH Mounting Rail
- ③ Rail Pins

PRODUCTS ESSENTIAL FOR THIS INSTALLATION

MOUNTING RAIL



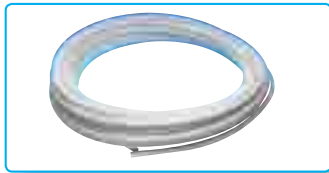
Part No.	Description
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EDGE STRIP



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JGUFHEDGE	25 METRE ROLL

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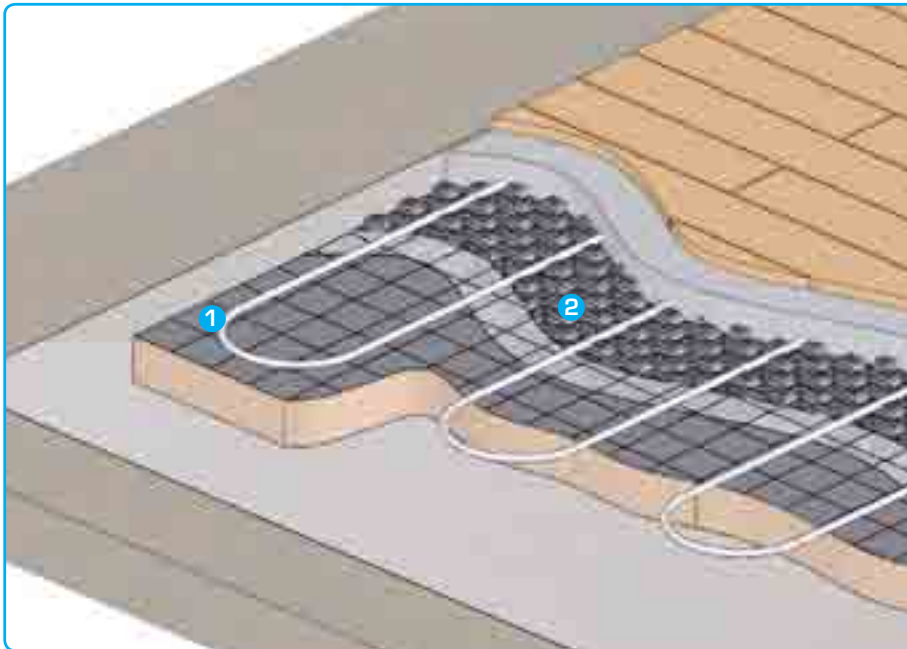
* For further information on installation methods refer to the JG UFH Installation and Technical Guide.

Pipe Installation - Solid Floors

FLOOR PANEL SYSTEM

INSTALLING FLOOR PANEL SYSTEM*

Speedfit Floor Panels make a simple grid to ensure quick and easy pipe laying and also provide a precise guide for the pipe, ensuring that minimum pipe bending radius is achieved. Suitable for use with cement screed (4:1 mix), pumped screed systems (anhydrite, etc.), fine or heavy concrete or polymer modified screeds.



- ① 15mm JG Layflat Pipe
- ② Floor Panel

PRODUCTS ESSENTIAL FOR THIS INSTALLATION

FLOOR PANELS



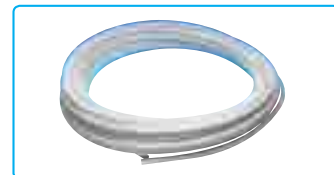
Part No.	Description	Size
JGUFHTILE	FLOOR TILE	1400MM X 800MM

EDGE STRIP



Part No.	Description
JGUFHEDGE	25 METRE ROLL

JG LAYFLAT® POLYBUTYLENE BARRIER PIPE



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15BPB-100C	BARRIER PIPE	15MM X 100M
15BPB-120C	BARRIER PIPE	15MM X 120M
15BPB-150C	BARRIER PIPE	15MM X 150M

* For further information on installation methods refer to the JG UFH Installation and Technical Guide.

Pipe Installation - Suspended Floors

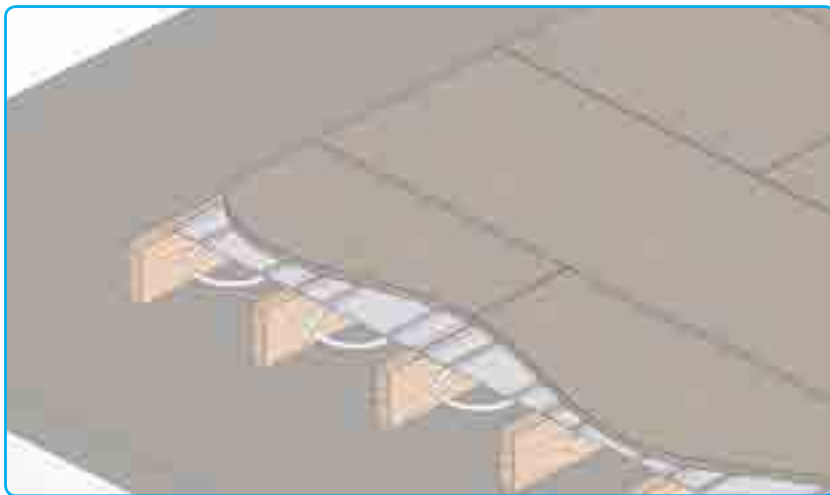


SUSPENDED TIMBER FLOORS

Underfloor Heating can also be used on timber and floating floors generally using heat spreader plates to transfer the heat from the pipes. There are many variations of these floor types and particular requirements should be discussed with our Technical Support Team.

Speedfit Pipe is installed into grooved aluminum plates which are first fixed from above in the case of traditional joists or from below when engineered I-Beam Joist systems are used. If the floor can be raised, floors can also be counter-battened to make installation even easier. Insulation is installed below the plates and it is important that the floor decking is in contact with the plate to maximise output.

SPREADER PLATES



UNDERFIT



Pipe Installation - Suspended Floors

INSTALLING JG UFH PLATE SYSTEM - FROM ABOVE*

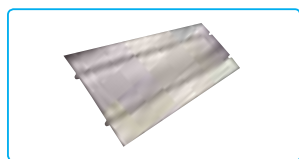
JG Speedfit's plate system is designed for use in timber suspended or battened floors. The floor system uses aluminium single or double spreader plates to transmit the heat evenly across the finished floor surface.

As illustrated, they can be used below a floor supported on insulation. Alternatively, where there will be a secondary layer of floor placed above a sheet sub floor, the plates can be sandwiched between the floor layers supported on battens. With a twin layer floor this second method is recommended as it removes a layer of resistance to heat transfer.

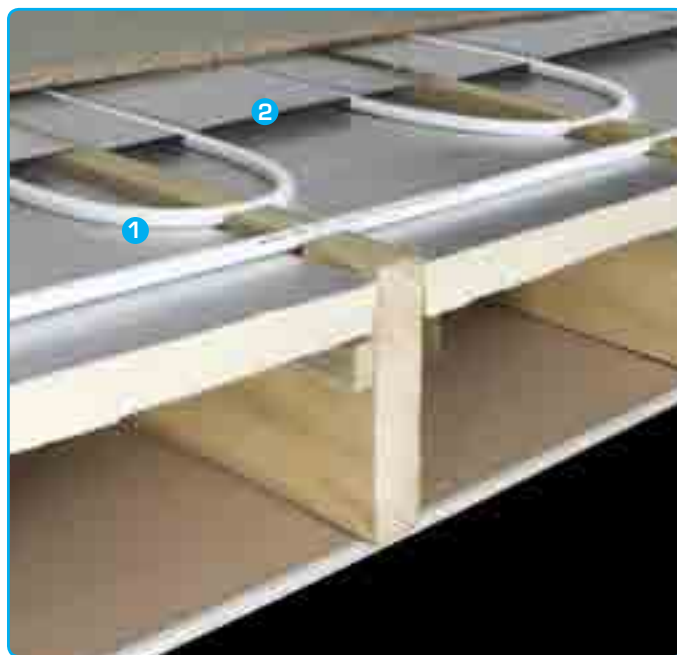
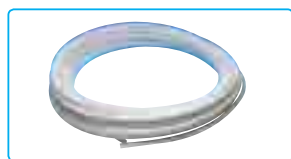
- ① 15mm JG Layflat Pipe ② Spreader Plates - From Above

PRODUCTS ESSENTIAL FOR THIS INSTALLATION

SPREADER PLATES - FOR ABOVE



JG LAYFLAT® POLYBUTYLENE BARRIER PIPE



INSTALLING JG UFH PLATE SYSTEM - FROM BELOW*

JG Plate from below system is intended for use with modern pre engineered joists.

As modern joists rely on the floor above being bonded and screwed to the joist's top surface. Because of this, the normal practice of fitting the plates onto the top of the joists is not available.

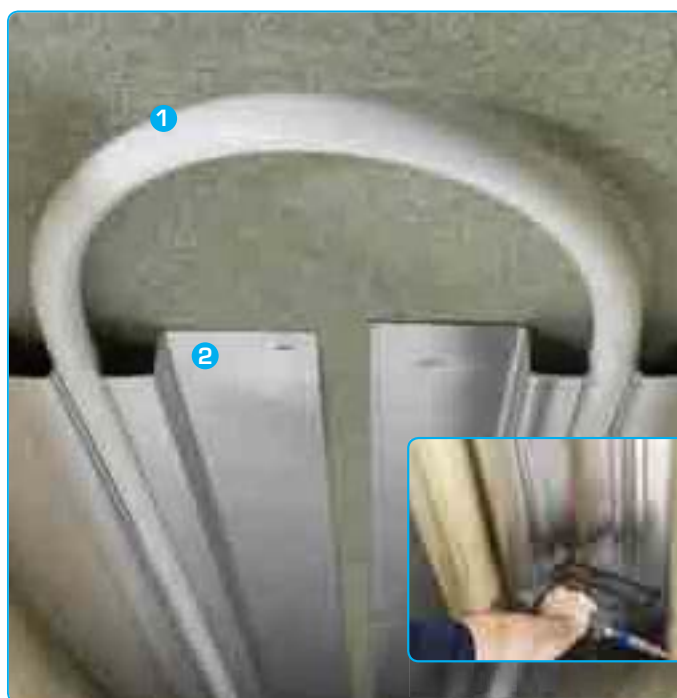
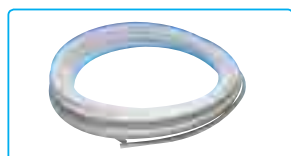
- ① 15mm JG Layflat Pipe ② Spreader Plates - From Below

PRODUCTS ESSENTIAL FOR THIS INSTALLATION

SPREADER PLATES - FOR BELOW



JG LAYFLAT® POLYBUTYLENE BARRIER PIPE



* For further information on installation methods refer to the JG UFH Installation and Technical Guide.

Pipe Installation - Suspended Floors

INSTALLING JG UNDERFIT® - JOISTS AND BATTENED FLOORS*

A grooved, foil faced insulation panel for installing 15mm Speedfit pipe over existing floor structures (between battens) or under the floor (between existing joists). The system is a suitable choice for both new build and renovation projects.

Similar to other JG Speedfit Underfloor Heating systems, a variety of floor coverings can be used.



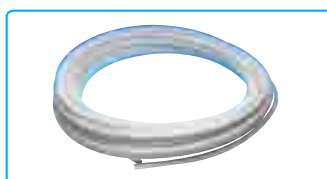
- 1 15mm JG Layflat Pipe
- 2 Underfit Board

PRODUCTS ESSENTIAL FOR THIS INSTALLATION

UNDERFIT® BOARD - JOISTS AND BATTENED FLOORS



JG LAYFLAT® POLYBUTYLENE BARRIER PIPE



DATA - 50mm UNDERFIT® BOARD

Dimensions	- 1200 x 350 x 50mm
Materials	- Expanded Polystyrene BS EN 13163
Compressive Strength	- 100 (kPa) @ 10% compression
Conductivity	- 0.036 (W/mk)
Heat Output	- Up to 60w/m ²
Recommended Flow Temperature	- 50 - 60°C
Pipe Centres	- 200mm
Maximum Circuit Length	- 100m
Typical Coverage per Loop	- 15 - 20m ²
Applications	- New Build or renovation, single or multiple rooms

Floor Coverings	- Tiles/slate/ceramic etc. Carpet/Vinyl Laminate floors Natural wood
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* For further information on installation methods refer to the JG UFH Installation and Technical Guide.

Pipe Installation - Existing Floors

OVERFIT BOARDS (RETROFIT)

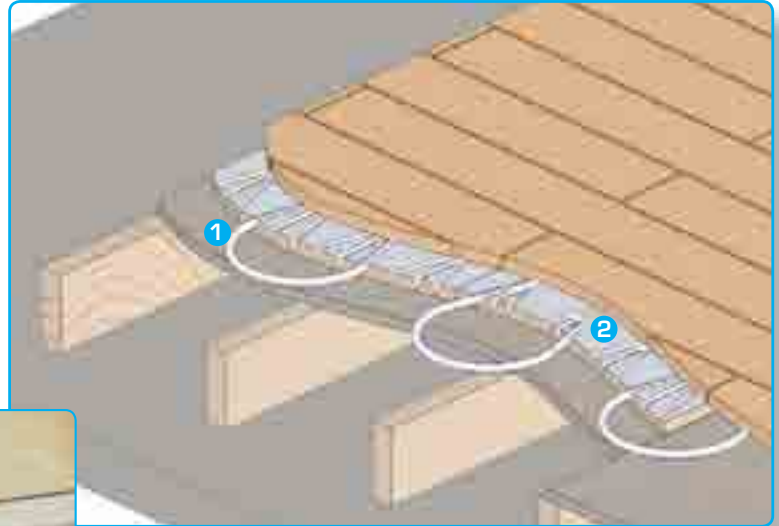
INSTALLING THE JG OVERFIT® SYSTEM*

JG Overfit® is a low profile System for new build or renovation projects.

It is a lightweight insulated panel with high compressive strength intended for use with lightweight floor coverings, e.g. laminate, engineered wood and carpet. Due to its ease of handling and cutting it is also suitable for larger areas and multiple room installations.

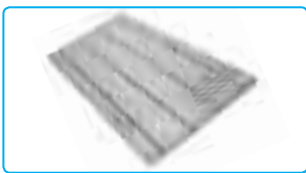
The installation uses 15mm pipe and 150mm centres for a highly responsive system.

- ① 15mm JG Layflat Pipe ② Overfit Board



PRODUCTS ESSENTIAL FOR THIS INSTALLATION

OVERFIT® BOARD



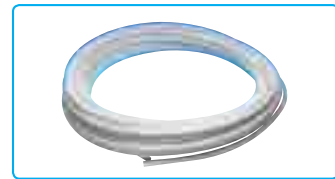
Part No.	Description	Size
JGUFHBOARD1	OVERFIT BOARD	1250MM X 600MM

EDGE STRIP



Part No.	Description
JGUFHEDGE	25 METRE ROLL

JG LAYFLAT® POLYBUTYLENE BARRIER PIPE



Part No.	Description	Size
15BPB-50C	BARRIER PIPE	15MM X 50M
15BPB-100C	BARRIER PIPE	15MM X 100M
15BPB-120C	BARRIER PIPE	15MM X 120M
15BPB-150C	BARRIER PIPE	15MM X 150M

DATA - 25mm OVERFIT® BOARD

Dimensions	- 1250 x 600 x 25mm
Materials	- Extruded Polystyrene-XPS2 (BS EN 13164)
Compressive Strength	- 250 (kPa) @ 10% compression
Conductivity	- 0.029 (W/mk)
Heat Output	- Up to 60w/m²
Recommended Flow Temperature	- 50 - 60°C
Pipe Centres	- 150mm
Maximum Circuit Length	- 100m
Typical Coverage per Loop	- 13 - 15m²
Applications	- New Build or renovation, single or multiple rooms

Floor Coverings	Tiles/slate/ceramic etc. - use with Knauff Brio Board or equivalent.
Carpet/vinyl	- use with suitable plywood covering.
Laminate floors	- use directly over insulation as floating floor.
Natural wood	- fix to battens between panels.

* For further information on installation methods refer to the JG UFH Installation and Technical Guide.



Underfloor Heating for Conservatories and Extensions

SINGLE ROOM CONTROL UNIT

Part No.	Description
JGROOMPACK/2	SINGLE ROOM CONTROL UNIT

The new Speedfit Underfloor Heating Control Unit is the ideal way to provide heating to a conservatory or room extension, up to 30 sq m.

The unit is pre-assembled and pre-wired to allow for a fast and simple installation. It can be plugged into any convenient electrical socket or spur.

The control unit has integral ball valves to allow for isolation from the primary heating system, an adjustable blending valve and a six metre head circulation pump. An anti-vibration mounting bracket ensures silent operation.

Speedfit push in connections make for a fast connection to pipework.

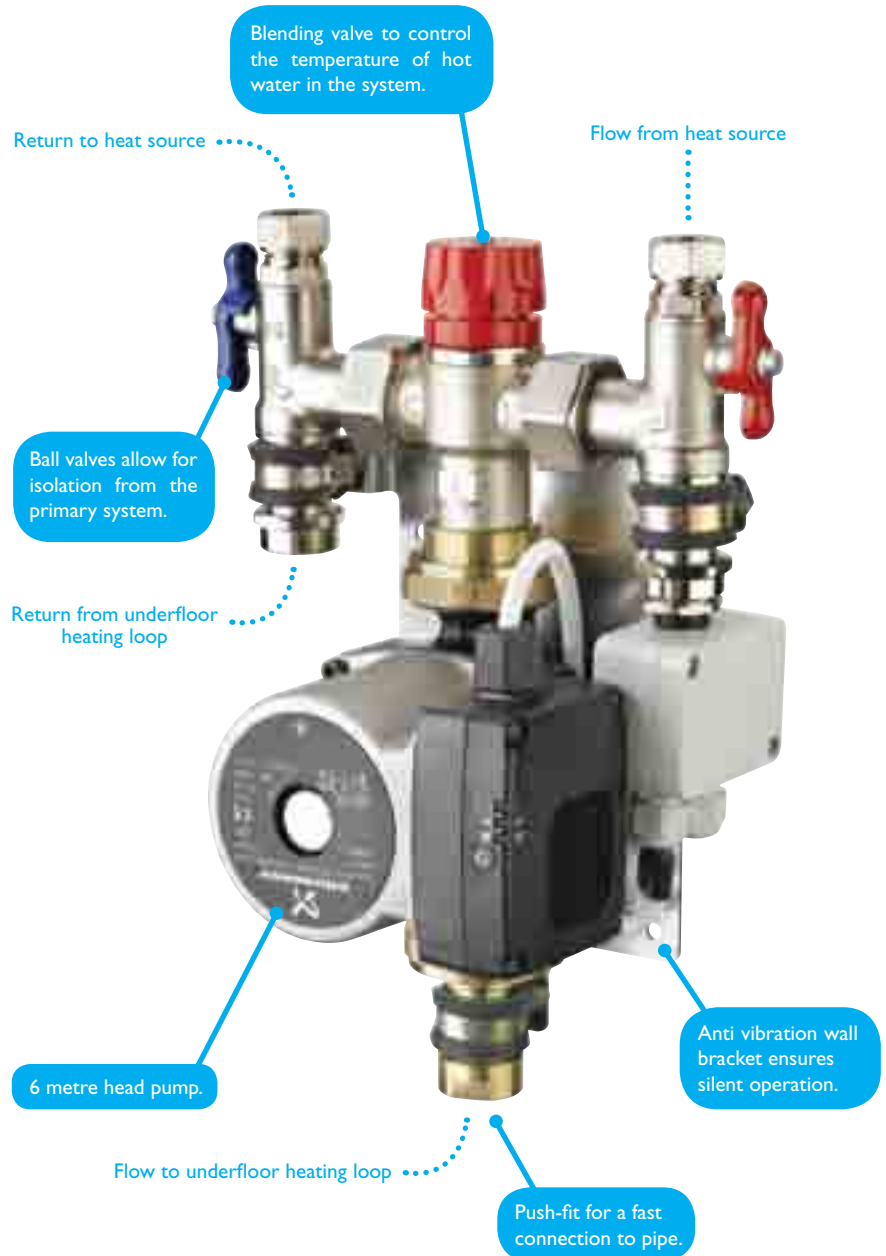
Speedfit recommend connection to the main central heating flow and return distribution system, using a dedicated motorised valve. It is also possible to connect to the nearest radiator supply pipe. If connected to an existing radiator circuit, the pump will be unable to operate independently, only able to obtain hot water when the radiator system is on.

A full and detailed installation guide is provided with each unit.

The Speedfit Underfloor Heating Control Unit is suitable for use when:

- The boiler serving the existing heating system has the capacity to take the extra output from 2KW to 3KW.
- The maximum area to be heated is 30 sq metres.

The Control Unit is designed to be used with Speedfit Barrier Pipe. The amount of pipe needed is determined not only by the size and shape of the room but by the resistance of the floor finish to heat transfer.



OPERATING PRINCIPLES

The Speedfit Control Unit will operate automatically when the central heating circuit is on and the water temperature flowing through it has reached 40°C. The pump will continue to run until the temperature of water flowing through it from the heating circuit falls to approximately 30°C.

The blending valve will maintain the temperature of the underfloor heating circuit by blending flow from the boiler with the cooler return flow from the underfloor heating circuit.

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. Control can be either 5 day/2 day or 7 day with up to 4 different time and temperature settings per day.

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.



INSTALLATION REQUIREMENTS

The Heating Packs are designed to be used in solid floor applications.

The floor insulation material will normally need to be 50mm, the pipe fixed to the insulation using floor clips. A sand and cement screed of 65mm to 75mm laid on top.

In areas of high heatloss such as conservatories, additional heating may be needed to achieve comfort levels.

A detailed Installation Guide is provided with each unit.

Please note Single Room Pack installations are not included as part of our Design and Technical Support Service.

For floor areas greater than 30 sq m, Speedfit offer an Underfloor Heating System that can cater for any size of project. Wireless controls are now available for even greater time savings during installation. Please contact the Technical Help Desk Tel 01895 425333.

Part No.

JGUFHPACK20/2

THE 20SQM PACK CONTAINS :-

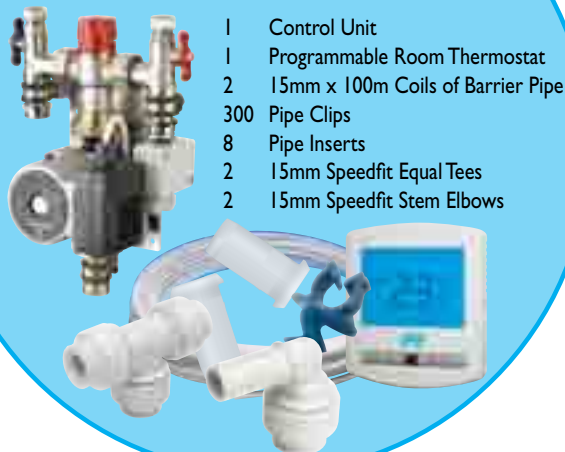


- 1 Control Unit
- 1 Programmable Room Thermostat
- 1 15mm x 150m Coils of Barrier Pipe
- 200 Pipe Clips
- 2 Pipe Inserts

Part No.

JGUFHPACK30/2

THE 30SQM PACK CONTAINS :-



- 1 Control Unit
- 1 Programmable Room Thermostat
- 2 15mm x 100m Coils of Barrier Pipe
- 300 Pipe Clips
- 8 Pipe Inserts
- 2 15mm Speedfit Equal Tees
- 2 15mm Speedfit Stem Elbows

Part No.

JGUFHWPACK30/2

THE WIRELESS 30SQM PACK CONTAINS



- 1 Control Unit
- 1 Wireless Programmable Room Thermostat
- 2 15mm x 100m Coils of Pipe
- 300 Pipe Clips
- 8 Pipe Inserts
- 2 15mm Speedfit Equal Tees
- 2 15mm Speedfit Stem Elbows
- 1 2 Zone Wireless Receiver

Mains Voltage Controls System

The components in the mains voltage control systems have been designed to work with their respective wiring centres and are not intended to be used with other wiring centres.

- **Easy to use**
- **Easy to install**
- **Attractive slimline components**

Easy to use and install, the John Guest Mains Voltage Controls offer simple but effective control of up to 8 zones. The UH3 Wiring Centre is the hub of the system. It works either in conjunction with our Touch Screen Time Clock and simple to use Dial Setback Thermostats, or, alternatively, our Programmable Room Thermostats. There is also the ability to use both types of thermostat in the same system.

The JGUH3 Wiring Centre has the capability for control of 8 heating zones and integrated connections for underfloor heating zones, boiler, hot water control, Time Clock and the option of a radiator circuit. Having all wiring rooted to one central point makes the JGUH3 much easier to wire up than a conventional underfloor heating wiring centre.

TOUCH SCREEN TIME CLOCK



Part No.	Description
JGTM4	TOUCH SCREEN TIME CLOCK

- **Touch Screen technology**
- **Operates up to 4 zones**
- **4 different time settings per day**
- **Holiday function**

Designed to be used with JGDSSB Dial Setback Room Thermostat (see page 17) and the UH3 Wiring Centre.

A mains voltage Touch Screen 4 Channel Time Clock that can be set to a 5day/2day or 7 day programme mode and has the facility to operate up to 4 different time settings per day. The 4 zones can be used to control underfloor heating, radiator heating or hot water.

A copy facility makes for easier programming. Whilst a holiday function will put the system into permanent set back mode while you are away from the property.

Note that Programmable Room Thermostats do not need the control of a separate time clock as they have their own built in time and temperature facility.

PROGRAMMABLE ROOM THERMOSTAT



Part No.	Description
JGPRTE	PROGRAMMABLE ROOM THERMOSTAT

- **Individual zonal temperature control**
- **5 day/2 day or 7 day programme**
- **Multi functional**

A slimline Digital Programmable Room Thermostat to give individual time and temperature control on a 5 day/2 day or 7 day programme to allow for different time settings for every day of the week providing total flexibility. Offers the facility of up to 4 different time and temperature settings per day. The thermostats are multi-functional and self learning. This means that to avoid unnecessary use of energy, the thermostat will delay the heating start up until the last possible moment needed to achieve comfort level at the programmed time.

The thermostat features a large backlit display which makes for easy reading when in use, and has the facility to connect to a remote probe part number JGPROBE (see page 12).

A holiday function reduces the set temperature to a frost setting during a holiday period and reverts back to comfort level at the end of a predetermined period.

PROGRAMMABLE ROOM THERMOSTAT PLUS HOT WATER TIMER



Part No.	Description
JGPRTHW	PROGRAMMABLE ROOM THERMOSTAT PLUS HOT WATER CONTROL

- **Individual zonal temperature control**
- **Addition of 5 day/2 day hot water timer**

As JGPRTE but with an addition of a 5 day/2 day timer for domestic hot water. Heating and hot water can be set to give different timed control periods.

DIAL SET BACK ROOM THERMOSTAT



Part No.	Description
JGDSSB	DIAL SET BACK ROOM THERMOSTAT

Used in conjunction with a Touch Screen Time Clock JGTM4.

A modern easy to use Dial Room Thermostat with Set Back facility controlled from a centralised time clock JGTM4.

The thermostat is set manually to "Daytime" temperature. A "Set Back" mode reducing temperature by 4°C is controlled by a Central Timer Clock (Part Number JGTM4). A manual override allows for permanent "Daytime" or permanent "Set Back".

Neons indicate "Daytime" and "Set Back" mode and confirm if the room is calling for heat.

The thermostat also has the facility to be connected to a remote probe part number JGPROBE.

8 ZONE WIRING CENTRE



Part No.	Description
JGUH3	8 ZONE WIRING CENTRE

- **Easy to wire**
- **4 time clock connections**

Easily wired up, the wiring centre offers a simple solution for the control of Underfloor Heating, plus hot water and 1 radiator circuit, conveniently allowing all to be wired to a central base.

Of 4 Time clock connections, 2 are dedicated for setback zones and 2 are user selectable for hot water, towel rail or radiator circuits.

Neons indicate Zone, Power, Water, Pump, Boiler and Motorised Valve operation.

Dedicated connections for Boiler, UFH Pump UFH Motorised Valve, 4 Channel Time Clock, Actuators etc.

JGUH3 can also be used for the control of Energy Saver Radiator Zones (see page 28).

Network Control System (Low Voltage)

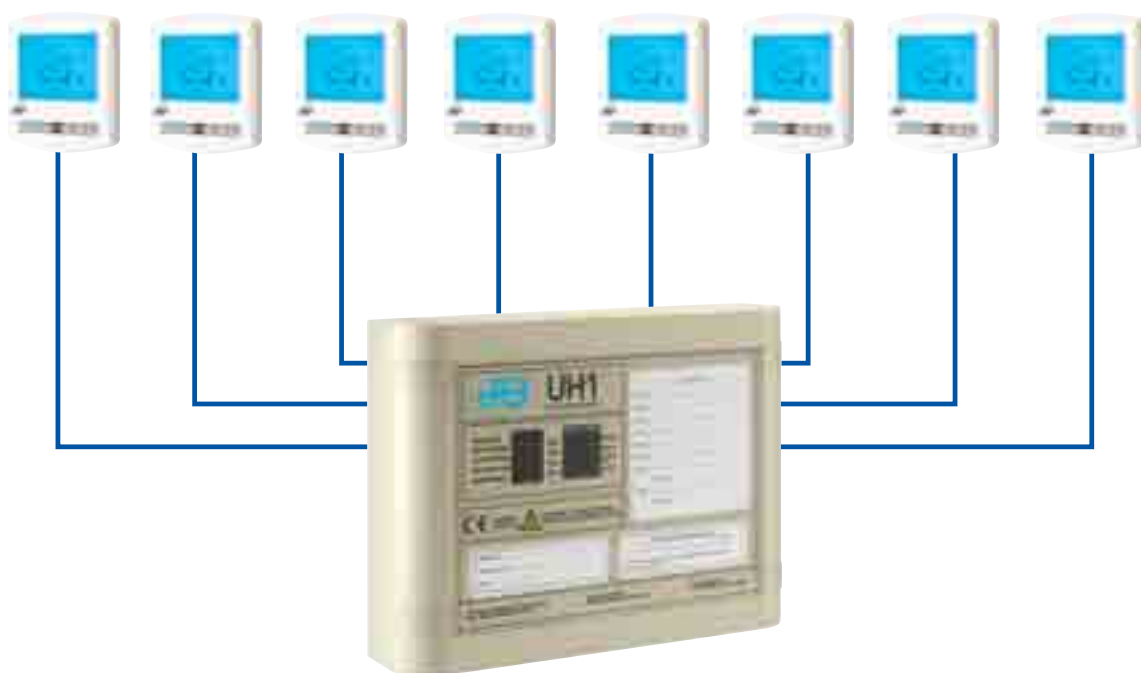
- **Easy to install and use**
 - **Reliable**
 - **Slimline, attractive components**
 - **With upgrade options**
- A range of deluxe Touch Screen Programmable Room Thermostats.
 - Direct control, of the whole system from a central TouchPad Controller.
 - Software options to give direct control from a PC, via the internet or from a mobile phone.

The new Underfloor Heating Network Control System from JG Speedfit differs from a normal underfloor heating system in that low voltage electrical components are 'networked' together using computer network cable*. This one cable carries signals between a wiring centre and all the components. The system enables programming of time and temperature for individual rooms to be carried out directly at the room thermostat or centrally by choosing from a number of upgrade options:-

**CAT5 cable is similar to telephone cable and used as computer network cable.*

Beldon cable is best described as a heavier duty version of CAT5, it is easier to use than CAT5 and we would recommend Beldon cable be used on all installations.

However, if using CAT5 cable, ensure it is the shielded type. It is important to connect Y and B (Yellow and Blue) communication cables using two strands from a twisted pair.





Network Control System (Low Voltage)

PROGRAMMABLE ROOM THERMOSTAT



Part No.	Description
JGSTAT/V3	PROGRAMMABLE ROOM THERMOSTAT

Room Thermostat which can be programmed in either 5 day/2 day or 7 day mode. Offers the facility of up to 4 different temperature settings per day. The thermostats are multi functional and are self learning. This means that to avoid unnecessary use of energy, the thermostat will delay the heating start up point until the last possible moment needed to achieve the comfort level at the programmed time.

Can also be controlled using a TouchPad or PC or remotely using a PC with an internet facility.

The thermostat also has the facility to connect to 2 remote probes (JGPROBE).

PROGRAMMABLE ROOM THERMOSTAT PLUS HOT WATER CONTROL



Part No.	Description
JGSTATPLUS/V3	PROGRAMMABLE ROOM THERMOSTAT

Room Thermostat which can be programmed in either 5 day/2 day or 7 day mode with an additional program for domestic hot water. Hot water can then be set to give 4 different timed control periods.

Can also be controlled using a TouchPad or PC or remotely using a PC with an internet facility.

Note there is no remote probe facility with this model.

8 ZONE WIRING CENTRE



Part No.	Description
JGUH1	8 ZONE WIRING CENTRE

Offers a simple solution for the control of underfloor heating hot water and radiator circuits that can all be wired to one central base. This also brings the benefit of TouchPad or internet control to radiators and hot water as well as to underfloor heating.

Actuators, boiler and pump connections are wired to a single point. Used in conjunction with our Network thermostats and ideally installed near to the manifold, the Wiring Centre provides individual control of up to 8 zones plus hot water.

Neons show Power, Water, Pump, Boiler and Motorised Valve.

REMOTE PROBE & SENSOR BOX



Part No.	Description
JGPROBE	REMOTE PROBE
JGSENSOR	SENSOR BOX

Use with a JGSTAT/V3 or a Touchscreen Thermostat

Used in conjunction with a thermostat to control temperature in another room or to control floor temperature.

When using an air sensor, install with a JGSENSOR Sensor Box.

Network Touch Screen Range

The JG Speedfit Touch Screen Range of deluxe Touch Screen Programmable Room Thermostats can be used alongside other network products allowing remote programming from options such as TouchPad, Home PC, the internet or

mobile phone giving ultimate control over your heating system. The intuitive, easy to use touch screen display makes the user manual a thing of the past.

NETWORK TOUCH SCREEN THERMOSTAT FEATURES

- 4 Heating Levels
- Optimum Start
- Holiday Function
- Keylock Function
- Temperature Hold Function
- Temperature Override
- Frost Protection

TOUCH SCREEN NETWORK ROOM THERMOSTAT



Part No.	Description
JGSTAT/TS/V3	TOUCH SCREEN NETWORK ROOM THERMOSTAT

Can be used in 5 day/2 day mode or a 7 day mode to allow for different time settings for each day of the week, giving total user flexibility.

The Thermostat is self-learning. To avoid unnecessary use of energy, the thermostat can be set to optimum start, delaying the heating start up to achieve the comfort level at the programmed time.

TOUCH SCREEN NETWORK ROOM THERMOSTAT PLUS HOT WATER CONTROL



Part No.	Description
JGSTATPLUS/TS/V3	TOUCH SCREEN NETWORK ROOM THERMOSTAT

Has all the features of the JGSTAT/TS/V3 plus the additional programme for domestic hot water. The hot water feature can be set to give 4 different time control periods per day.

TWIN CHANNEL TOUCH SCREEN NETWORK ROOM THERMOSTAT



Part No.	Description
JGSTAT2/TS/V3	TOUCH SCREEN TWIN CHANNEL NETWORK ROOM THERMOSTAT

Brings the sophistication of touch screen technology at a similar cost to using dial thermostats by reducing the number of thermostats required in a property.

The 2 channel facility allows one thermostat to control 2 zones at the touch of the thermostat's screen. This makes it perfect for a bedroom with ensuite or living room and dining room.

Network Software Options

NET MONITOR



Part No.	Description
JGNETMON1	NET MONITOR

With built in software

Allows for communication over the internet from any PC without the need for specialist software to be installed, dialling into the system via the internet using a password.

NET MONITOR - GSM



Part No.	Description
JGNETMON2	NET MONITOR GSM

With built in software

Has the same functions as JGNETMON1 but with an additional GSM facility.

This means the user can control the whole house heating system using text messaging on a mobile phone. Recommended for holiday homes or for people who work away from their property.

TouchPad Option

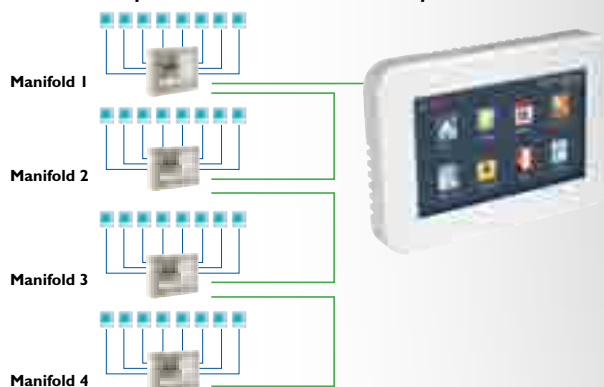
Control up to 32 zones

TOUCHPAD NETWORK CONTROLLER



Part No.	Description
JGTOUCHPAD/TFT	TOUCHPAD NETWORK CONTROLLER

The Touchpad can be used to control up to 32 zones.



The TouchPad features an easy touch screen control of up to 32 zones of heating. You are able to name each thermostat allowing easy identification of each thermostat in the network, remotely program the comfort levels of all networked thermostats from one central point. Program settings can be copied from one thermostat to another.

Also has the option of being able to control the hot water and radiator circuits.

TFT Display - New Features

New TFT LCD offering a greatly improved viewing angle and display resolution.



v3 Compatible - The New TFT Touchpad is compatible with v3 thermostats.



Group Feature - Allows the user to group thermostats, for use with Profile function.



Profile Feature - Allows the user to pre-program a set of comfort levels, apply them to a group of thermostats and store against a profile name. When the profile is run, the thermostats in the group receive the new comfort levels.



Zone Link Facility - Linked zones appear as a linked button, meaning that programmed comfort levels are sent to all of the linked zones.



USB Function

- Ability to import pictures (for screensaver operation)
- Export of history data
- Update of firmware via Internet Download



Heat/Cool Function - An upgrade will provide control for underfloor heating and cooling. This firmware update will provide dew point control.

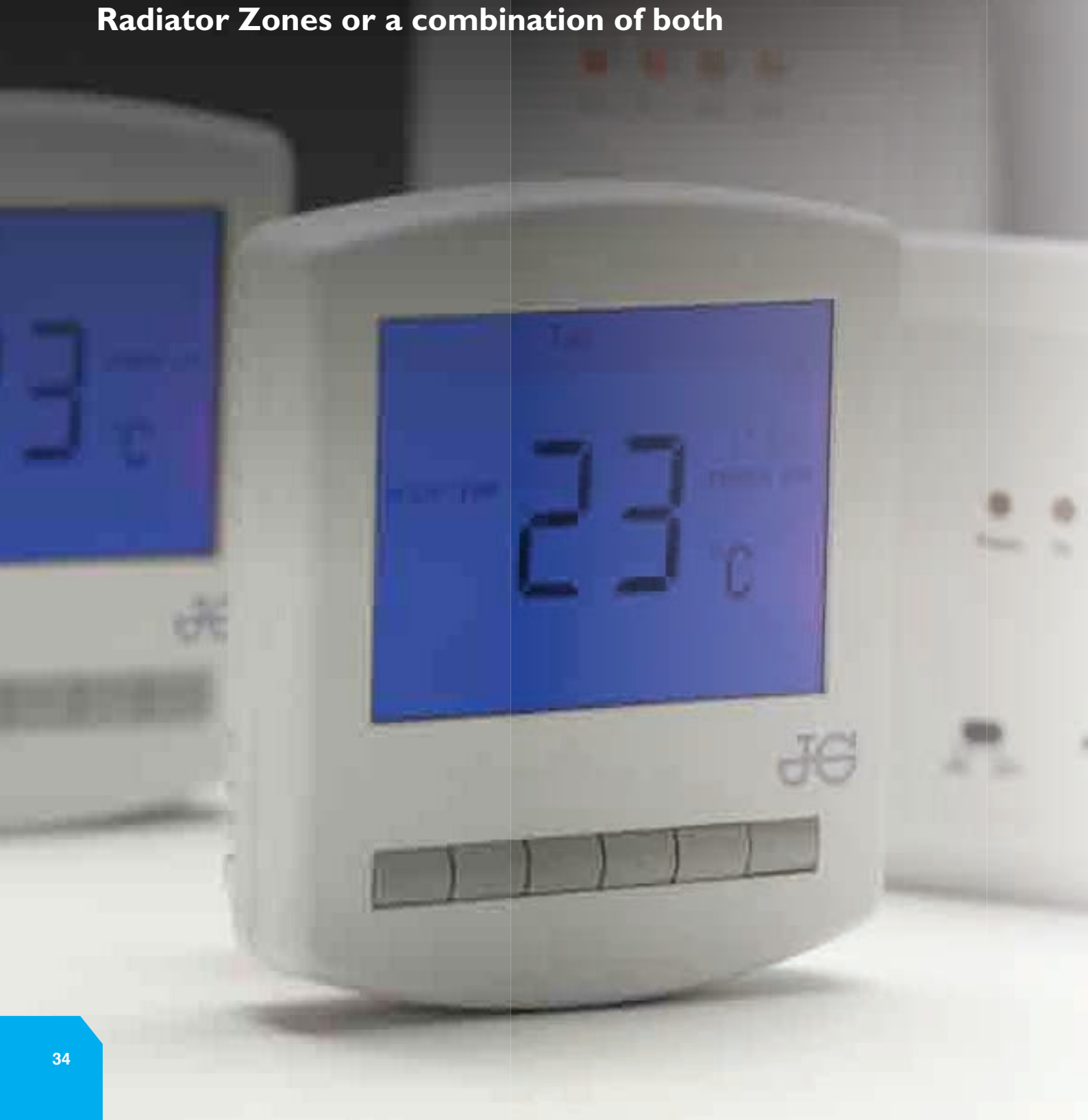


Language Function - Dutch, German, French and English will be supported.



Wireless Control System

- Easy to install and use
- Reliable
- Slimline, attractive components
- System can accommodate Underfloor Heating, Radiator Zones or a combination of both



The new Wireless Control System permits flexible location of thermostats in domestic heating installations. The programmable thermostats work in conjunction with the Wireless 8 Zone Wiring Centre, which is mains powered and is ideally suited to warm water Underfloor Heating as well as radiator installations. To extend the wireless range, wireless repeaters are available to 'boost' the signal. The system is a low cost and time-efficient alternative as no cables have to be run.

WIRELESS PROGRAMMABLE ROOM THERMOSTAT



Part No.	Description
JGWPRT	WIRELESS PROGRAMMABLE ROOM THERMOSTAT

Allows flexible location and ease of installation in domestic heating installations. The programming mode allows for 5/2 or 7 day set-ups at a 0-35°C temperature range.

With a battery operated range of up to 100m operating at a frequency of 868MHz, the wall mounted thermostats are compatible with receivers JGWWC and JGWRC.

There are 4 heating levels and a holiday function which puts the system into a permanent set-back mode while you are away from the property. The thermostats are not compatible with other JG control ranges.

WIRELESS PROGRAMMABLE ROOM THERMOSTAT PLUS HOT WATER



Part No.	Description
JGWPRTHW	WIRELESS PROGRAMMABLE ROOM THERMOSTAT

Similar to a standard Wireless Thermostat (JGWPRT) with the addition of a 5 day/2day timer for domestic hot water. Heating and hot water can be set to provide different timed control periods. Thermostats are not compatible with other JG control ranges.

WIRELESS REPEATER



Part No.	Description
JGBOOSTER	WIRELESS REPEATER

Mains powered this optional booster/repeater is placed between a thermostat/s that are out of signal range of the main receiver or in poor reception areas, allowing extended range.

Operating at a frequency of 868MHz, the signal is 'repeated' between receivers JGWWC or JGWRC. Recess mounted requiring 35mm back box. If needed, can also be used in multiples allowing extreme range. 230V powered and non-networkable.

WIRELESS 2 ZONE RECEIVER



Part No.	Description
JGWRC	WIRELESS 2 ZONE RECEIVER

Mains powered and is capable of controlling 2 heating zones or 1 heating and 1 hot water zone, using JG Speedfit Wireless thermostats.

Up to 32 units can be used with the wireless stats and has an operating distance of up to 100m. Recess mounted requiring 35mm back box. 230V powered and non-networkable.

WIRELESS 8 ZONE WIRING CENTRE



Part No.	Description
JGWWC	WIRELESS 8 ZONE WIRING CENTRE

Mains powered and ideally suited to warm water underfloor heating as well as radiator systems or a combination of both, using JG Speedfit Wireless Thermostats.

Operating at a frequency of 868MHz, central wiring allows for up to 8 zone actuators with an output for domestic hot water. Internal software can distinguish between hot water, underfloor heating, and radiator signals. 230V powered and non-networkable.

Optional aerial is available to extend range if required (JGAERIAL)



EXTERNAL AERIAL



Part No.	Description
JGAERIAL	EXTERNAL AERIAL FOR USE WITH 8 ZONE WIRELESS CENTRE JGWWC

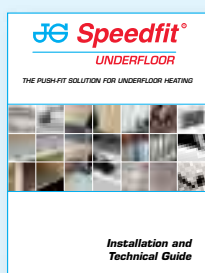
Speedfit Support

Speedfit Support's national team of technical engineers is available to help you get the best from your Speedfit System, be it assistance or advice.

Their service includes a free underfloor heating estimate, onsite installation advice, a technical helpline and a free CAD design service.

Technical Help Desk: 01895 425333
8am to 5pm Monday through Friday

Or email us at: info@johnnguest.com



Scan here with a smartphone to obtain a pdf version of our UFH Technical Document.

HI! I'M FROM
SPEEDFIT SUPPORT,
AND WE'RE HERE TO
SOLVE ALL OF YOUR
UNDERFLOOR
HEATING QUERIES.



SPEEDFIT SUPPORT



Free Design Service



Onsite Installation Advice



Online Project Estimator



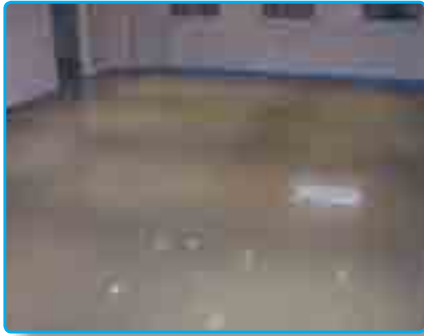
Technical Helpline



Online Info

Installation Advice

It is important to carefully consider the ideal installation method for your underfloor heating project. The pipe fixing technology offered by JG Speedfit Underfloor Heating will ensure that the right materials and methods are used for the job's requirements. Installations normally fall within three categories:



SOLID / SCREEDED FLOORS

The screed is an important and integral part of the UFH system, transferring energy from the pipes to the area to be heated. The response of this 'thermal mass' will depend on its depth and make up. The usual depth of screed is 65-75mm thick but it is possible depths can be reduced to assist in improving performance. It is suitable for use in either new build or existing properties.



TIMBER / FLOATING FLOORS

Often found in the upper floors of a property, a system is required where a solid floor installation is not suitable due to structural reasons.

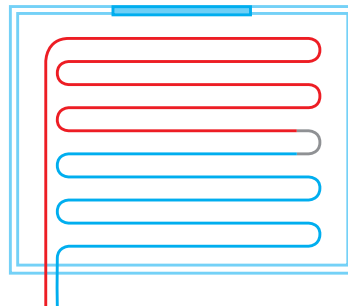


OVER EXISTING FLOORS

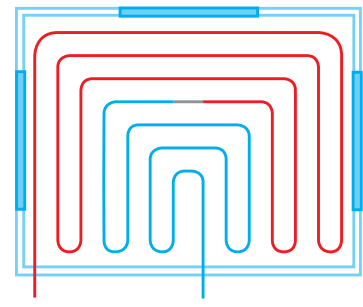
An Underfloor Heating system that is installed over existing flooring which is suitable for both new build and renovation projects. This means that current flooring does not require extensive alteration.

PIPE LAYOUT IN SOLID FLOOR INSTALLATIONS

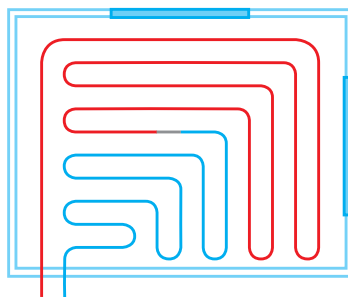
The shape of the room and the position of the outside walls and windows will determine the pattern of the pipe layout. The counterflow pattern is recommended although other options are shown opposite.



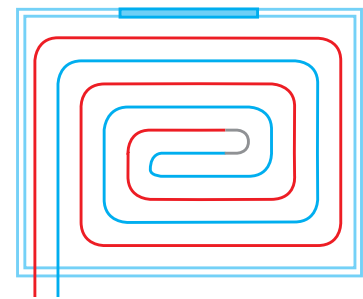
Single Serpentine



Triple Serpentine



Double Serpentine



Counterflow

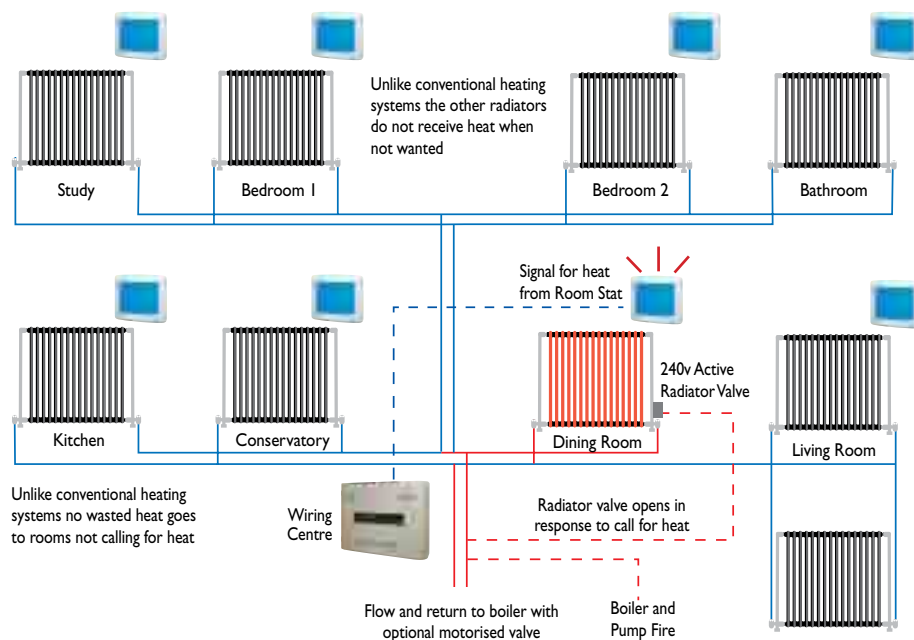
Energy Saver System

In a traditional heating system all the TRV's fitted to radiators are in the "Open" position and when turning the heating system on all the radiators become hot. When the room reaches the set temperature the radiator is shut off but the boiler is left to run, when the boiler overheats it turns off, cools down and then turns back on (Cycling). All this is wasteful in terms of energy wastage and cost.

The JG Energy saver system allows the user to have only the rooms they want on at the time that is suitable for that room but also gives each room the ability to turn the boiler on or off to prevent cycling and wasting energy needlessly.

It works by fitting valves that are in the "Closed" position as standard and controlling the opening with a Room thermostat. This roomstat will also control the boiler firing. This means that the user can decide which rooms need heat, at what times they come on and at what temperature they will warm to before turning off the boiler.

Control wires need to be routed to the radiators, but this will be an easy task enabling this system to be installed in new or existing applications worldwide.



The energy saving scenario on the right shows the savings that are possible. We compare this to a 4 bed house with 14 radiators on in winter from 6am to 11pm. This will yield a high 238 radiator hours compared to the 75 radiator hours of the JG Energy Saver.

3 Bed, 2 Bath, Hall & Kitchen	(Total: 7) x 2h (Morning)
+ Study heated	(Total: 1) x 8h (Office)
+ Kitchen heated	(Total: 1) x 1h (Lunch)
+ All downstairs radiators	(Total: 7) x 6h (5 - 11pm)
+ 3 bed, 2 bath	(Total: 5) x 2h (Night)
Total Radiator Hours: 75	

ELECTRICAL CONTROLS FOR USE WITH ENERGY SAVER SYSTEM

Choose from a range of:

Low Voltage Network Control Products

TOUCHPAD, TOUCH SCREEN THERMOSTAT, PROGRAMMABLE THERMOSTATS AND WIRING CENTRE



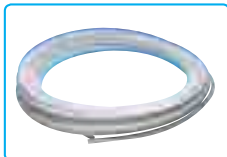
Mains Voltage Electrical Controls

WIRING CENTRE, TIME CLOCK, DIAL THERMOSTAT PROGRAMMABLE ROOM THERMOSTAT AND ACTUATOR VALVE



Pipe

SPEEDFIT PEX AND POLYBUTYLENE BARRIER PIPE



Heat Output - Dry Floor Constructions

With a wide variety of Underfloor heating systems available, it is important to know what heat output you can expect from differing floor make ups. Outputs for Screeded systems are normally calculated using proven mathematical equations and experience. However, with the increasing use of renewable heat sources and lower water temperatures, performance for dry floor constructions can be difficult to calculate. Therefore, due to our ongoing commitment to product development, Speedfit have conducted performance testing at the independent test house, BSRIA for the Overfit, Underfit & Aluminium Heat plates systems. The tables below show typical output figures for various floor coverings and flow temperatures.

For advice on specific systems please contact our technical helpline 01895 425333.

HEAT OUTPUT TABLES (W/M²)

25mm Overfit -

Floor Finish + Resistance (Tog Value)		Flow and Return Temperature °C			
	Tog Value	40/30	45/35	50/40	55/45
Tiles	0.1	36	50	65	78
Thin Timber Finish	0.5	32	45	58	70
Carpet Tiles / Laminate	1	29	40	52	64
Carpet and underlay	1.5	26	36	47	58

Figures based on 15mm PB tube using 150mm pipe centres and a 10mm Plywood laid over.

HEAT OUTPUT TABLES (W/M²)

50mm Underfit

Floor Finish + Resistance (Tog Value)		Flow and Return Temperature °C			
	Tog Value	40/30	45/35	50/40	55/45
Tiles	0.1	22	20	39	48
Thin Timber Finish	0.5	20	28	36	44
Carpet Tiles / Laminate	1	18	26	33	41
Carpet and underlay	1.5	17	22	31	38

Figures based on 15mm PB tube using 200mm pipe centres and a 22mm chipboard deck laid over.

HEAT OUTPUT TABLES (W/M²)

Aluminium Spreader Plates

Floor Finish + Resistance (Tog Value)		Flow and Return Temperature °C			
	Tog Value	40/30	45/35	50/40	55/45
Tiles	0.1	28	40	52	64
Thin Timber Finish	0.5	26	36	47	58
Carpet Tiles / Laminate	1	24	33	43	53
Carpet and underlay	1.5	22	30	39	48

Figures based on 15mm PB tube using 200mm pipe centres and a 22mm chipboard deck laid over.
Heat outputs are for guidance only and can vary with water temperature, floor finish and construction.

Further information and advice is available on 01895 425333 or www.speedfitufh.co.uk

Technical Checklist - Underfloor Heating

- **Applications.** Underfloor Heating Installations in solid or timber floors.
 - **Pipes.** 15mm JG Speedfit Barrier Pipe to BS 7291, Parts 1, 2 and 3 Class S.
 - **DO NOT USE Speedfit UFH Products for Gas, fuel oil or compressed air applications.**
 - **Floor Insulation.** Should be a suitable material and thickness to comply with current regulations.
 - **Minimum Bending Radii.** For Speedfit B-PEX Pipe is 175mm.
 - **Expansion (PEX - Pipe).** 1% on length between 20°C and 82°C.
 - **Cleaners, Inhibitors and Descalents.** For advice on the replenishment of additives such as corrosion inhibitors, the following manufacturers should be contacted Fernox Manufacturing Limited on 01799 550811 or Sentinel, BetzDearborn Limited on 0151420 9595.
 - **Paint and Chemicals.** Only use water or oil based paint. DO NOT ALLOW CONTACT WITH cellulose based paints, paint thinners or strippers, solder flux or acid based descalents or aggressive household cleaning products.
 - **Exposure to sunlight.** Speedfit products, when used indoors, are not affected by sunlight. When used outdoors protect from ultra violet light by lagging or painting.
 - **Pipe Inserts.** Must be used on all installations when using plastic pipe and should be fully inserted.
 - **Electrical Components.** Electrical products in the Speedfit Underfloor Heating System are designed only to be used in U.K. Electrical Supply situations.
 - **Electrical Continuity.** If Speedfit is used in an existing metal system which may have been used for earthing, electrical continuity should be reinstated.
 - **Pre-Screed System Testing.** To ensure the pipework has been installed correctly and prior to the screed being laid, it is essential that the system is checked and hydraulically wet tested.
Testing should be carried out at 2 bar for 10 minutes and 10 bar for 10 minutes.
- This testing, combined with other relevant checks, should reveal installation problems and is regarded as good plumbing practice.
- **Pressurisation During Screed Laying & Curing.** In accordance with BS1264-4, the system should be left under pressure at a minimum of 6 bar for the duration of the laying and curing of the screed.
- Under NO circumstances should the UFH System be used to quicken the screed drying process.**
- **System Flushing.** As is usual practice for any plumbing installation, flushing of the system prior to the use of JG Speedfit is recommended to remove any contaminants/chemical residue from elsewhere in the system.
 - **Vermin.** Speedfit products should not be used in vermin infested areas.
 - **Frost Protection.** During the installation process it is important that pipe containing water be protected from frost.

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AVAILABLE FROM:

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