Speedfit®

The Push-fit Solution for Plumbing and Heating Systems

NEW PRODUCTS INSIDE

UNDERFLOOR HEATING SYSTEMS

ENERGY SAVER MANIFOLD SYSTEM

June 2010

John Guest®

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.

BS7291
No. KM39767

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

Speedfit®

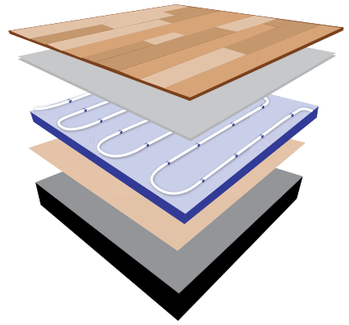
The Solution for Underfloor Heating

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 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 finishes.

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.

Technical Help Desk:
01895 425333

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.

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Low Voltage Network Control System

A new Network Control System which is both easy to install and reliable, with slimline and attractive components.

The basic system of Programmable Room Thermostats and Wiring Centre can be enhanced by a number of upgrade options.

PROGRAMMABLE ROOM THERMOSTATS AND WIRING CENTRE

Two models of Programmable Room Thermostats. Both offer 5 day/2 day or 7 day programming, one has hot water timer facility.

An 8 zone Wiring Centre used to connect the wiring from thermostats, actuator valve, boiler and pump and manage the control of the network.

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NEW

TOUCH SCREEN THERMOSTAT OPTION

A range of easy to use deluxe Touch Screen Programmable Room Thermostats make user manuals a thing of the past.

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TOUCHPAD CENTRAL CONTROLLER OPTION

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

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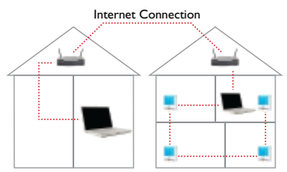
SOFTWARE OPTIONS

Control your underfloor heating from a home computer, via the internet or from a mobile phone.

Pages 14 and 15

Direct USB Connection



Ethernet Connection

NEW

Mains Voltage Electrical Controls System

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

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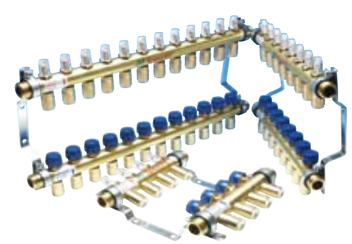
System Components

Manifolds, pumps, pipe fixing systems and much more to help you complete your installation.

Pages 18 and 19



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 20 and 21

Installation is Quick and Easy

Easy to follow guide on completing your installation.

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Energy Saver Manifold System

A manifold feed radiator system with individual zone control.

Pages 24 and 25

ESP

Underfloor Heating

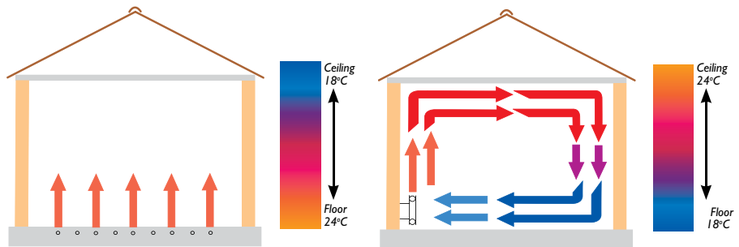
Underfloor heating provides the most comfortable even warmth of any heating system. It is economical to run and virtually maintenance free.

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 on 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 signal the Pump Pack when heat is 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:

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

Comfort
The system uses 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.

Health
Dust is minimised reducing the problem of house dust mites. Reduced numbers of hot surfaces and sharp edges minimise risk of burns or injury.

Efficiency Savings
Underfloor Heating Systems are designed to operate at lower temperatures than radiator systems, making them especially suitable for condensing boilers, resulting in reduced energy consumption and lower heatloss from the building structure.

Control
The system is easy to control and the small temperature difference between the floor and air means the system is virtually self-regulating.

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.

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.

SET BACK - EXPLAINED

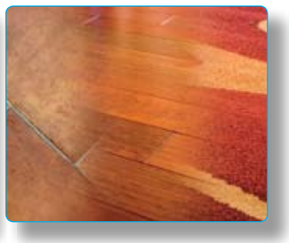
Compared to other forms of heating, underfloor heating has a relatively slow response time, taking longer to heat up and cool down than say radiator systems.

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.



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Network Control System (Low Voltage)

- **Easy to install and use**
- **Reliable**
- **Slimline, attractive components**
- **With upgrade options**

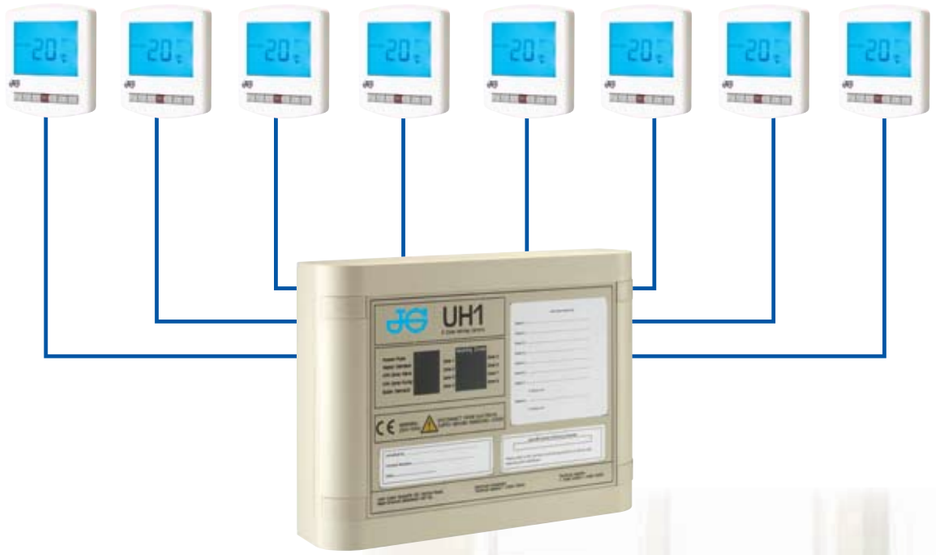
The new Underfloor Heating Network Control System from JG Speedfit differs from a normal underfloor heating system in that low voltage electrical components are 'networked' together using computer network cable*, this one cable carrying signals between a wiring centre and all the components. This system 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:-

- A range of de luxe 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.

**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 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. Thus, hot water can 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.

REMOTE PROBE & SENSOR BOX

Part No.	Description
JGPROBE	REMOTE PROBE
JGSENSOR	WHITE 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 White Sensor Box.

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.

Network Touch Screen Range

The JG Speedfit Touch Screen Range of de luxe Touch Screen Programmable Room Thermostats which 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.

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.

Includes a holiday function, which reduces to a frost setting over the holiday period and reverts back to comfort level to coincide with your return. The frost protection feature has an adjustable temperature setting.

The Thermostat has the facility to connect to either an air or floor probe (JGPROBE).

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 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.

Zone 1 uses the built in air sensor to control the room it is fitted in, whilst zone 2 uses the remote sensor provided to control an adjacent room. The 2 zones can be up to 20 metres away from each other.

The 2 channels significantly reduce installation time and cost by reducing the amount of wiring and associated labour, while giving the user a simpler and less cluttered look.

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TOUCHPAD NETWORK CONTROLLER

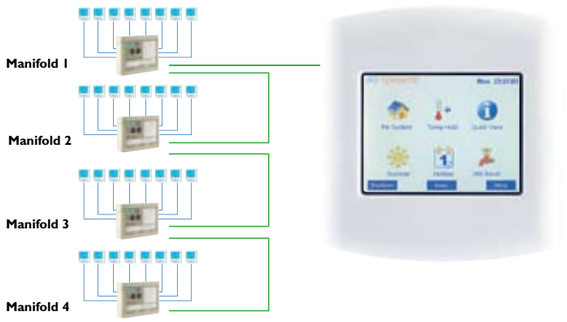
Part No.	Description
JGTOUCHPAD/V3	TOUCHPAD NETWORK CONTROLLER

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.

Display	*Colour Touch Screen (58 x 77mm)*
Max Zones	*32 zones.*
Title	*Gives each zone a unique name.*
Temperature Hold	*Use this function to hold a desired temperature for a fixed period. Ideal for unexpected activities.*
Holiday	*Use the Holiday function to put the heating in to frost mode whilst you are away.*
HW Boost	Quickly override the hot water timed setting.
Quick View	See at a glance the current thermostat status throughout your building.
Auto Time Sync	Synchronises all of the thermostat clocks on the network.
Auto GMT	Automatically corrects to Summer / Winter time.
History	View the hour run for the past 4 weeks or the temperature graph for the previous 24 hours.
Master Timeclock	Select which thermostats you want to work from the built in timeclock.
Key Lock	Lock each thermostat to prevent unauthorised tampering of the thermostat setting.
Password Protect	When enabled, the user must enter a pass code in order to program the network thermostats.
Summer	Turns the heating off, placing thermostats in frost mode. Hot water will run as programmed.
Frost Setting	Program the frost temperature for each thermostat.
Floor Limit	Program the floor limit for underfloor heating models.

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



TouchPad Option

Control up to 32 zones

Press My System

Launches the network page which shows all rooms with network thermostats.

Press Lounge

Shows room temperature

Press Programme

Launches Temperature Set Up page. Select hours, minutes and temperature.

Press Holiday

Set up Holiday mode.

Press Set Up

Launches System Set Up page

Press Extras

Extras

Set frost temperature for each zone

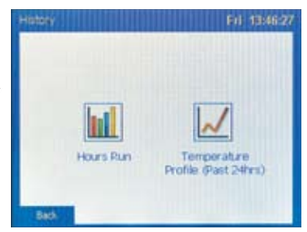
Set the upper floor temperature limit to prevent damage to floor surface

Calibrate screen with touch pen

Alter screen brightness

Press Quick View then press History

To view historical data.



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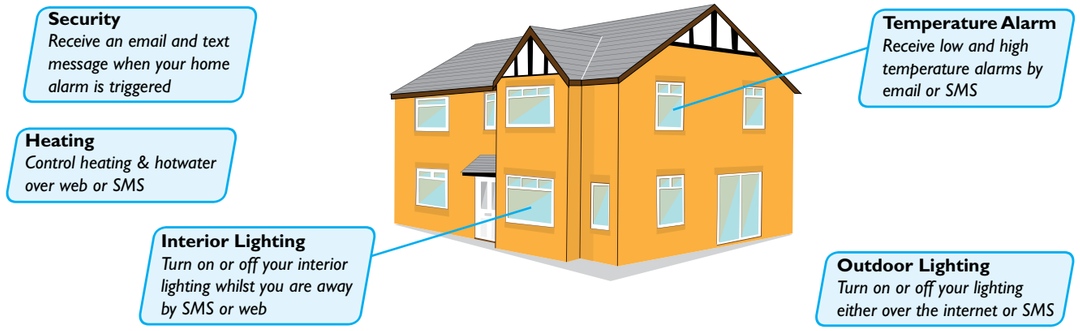
Software Options

The software options allow the user the luxury of convenient control of the heating system.

- **Direct from a home computer**
- **From a laptop via the internet**
- **By texting from a mobile phone**

SOFTWARE FEATURES

- ***Temperature View.*** *See at a glance the actual and set temperature for each thermostat throughout your building.*
- ***Program Comfort Level.*** *Program the comfort level for each thermostat on the network.*
- ***Override Feature.*** *Quickly override the set temperature for any thermostat.*
- ***Keylock.*** *Lock the keypad remotely to prevent unauthorised alteration of the thermostat settings.*
- ***Holiday.*** *Program a holiday period for all or selected thermostats, switches the thermostats into frost mode during this period.*



PC NETWORK SOFTWARE

Part No.	Description
JGPCLITE	PC NETWORK SOFTWARE

Allows for the control of your UFH System from a remote location, using a PC with broadband internet connection and loaded with the network software.

Can control up to 32 12 Volt Network Thermostats on a Windows based PC, using either a direct USB connection or an Ethernet adaptor.

The Ethernet connection allows you to control your heating thermostats within you home network (LAN) or wireless network (WAN) and also remotely over the internet.

Part No.	Description
JGPCPRO	NETWORK SOFTWARE

The System is as JGPCLITE but allows the control of up to 900 network room thermostats.

Making the System suitable for hotels, nursing homes schools and any situation where the temperature of the facility needs to be controlled from a remote location.

USB ADAPTOR

Part No.	Description
JGUSB	USB ADAPTOR

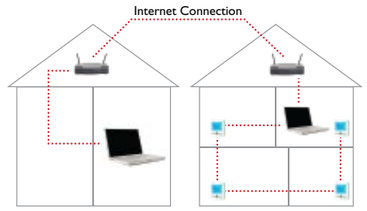
Direct USB Connection

A USB Adaptor that connects directly to a PC that has been loaded with JGPCLITE software so it can 'talk' to the 12-volt network products. The Adaptor can control up to 32 room thermostats.

ETHERNET ADAPTORS

Part No.	Description
JGNETADAP1	1 Port Ethernet Adaptor (controls up to 32 room thermostats)
JGNETADAP1	2 Port Ethernet Adaptor (controls up to 64 room thermostats)

Connects to a PC with JGPCLITE software so it can 'talk' to 12 Volt Network Products. The Adaptor can be connected to a broadband router to enable the PC to 'talk' to the system over the internet.



Ethernet Connection

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.

Used in conjunction with the JGUH1 Wiring Centre to allow the user to take control of heating and hot water over the internet from any web browser. Plug the Netmonitor into your home internet router and the built in software allows compete control of the system.

- Program up to 32 12-volt thermostats (JGSTAT) from any internet browser worldwide.
- Connect up to 6-volt free alarms such as home alarms and receive alarm indication on email.
- Control up to 6 appliances remotely via a web browser.
- Connect up to 6 remote temperature sensors to be used for alarm or monitoring.

NET MONITOR - GSM

Part No.	Description
JGNETMON2	NET MONITOR GSM

With built in software

Has the same functions as JGMON1 but with an additional GSM facility.

This means the user can control the whole house heating system using text messaging on a mobile phone. The heating can be turned up down, on or off with a few simple text commands. The unit also sends a text message alert as a confirmation.A text message or email can also be sent to alert the owner if there is a fault on the system. Recommended for holiday homes or for people who work away from their property.

- Communicate by email or text message.
- Program up to 32 12-volt room thermostats (JGSTAT) from any internet browser worldwide.
- Connect up to 6 remote temperature sensors to be used for monitoring or alarm purposes.
- Connects up to 6 volt free alarms such as home alarms and receive indications on email or text message.
- Control up to 6 appliances remotely via web browsers or text messaging.

Speedfit®

New 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 new 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 UH3 Wiring Centre has a total 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 to one central point makes the UH3 much easier to wire up than a conventional underfloor heating wiring centre.

TOUCH SCREEN TIME CLOCK

Part No.	Description
JGTM4	TOUCH SCREEN TIME CLOCK

Designed to be used with JGDSSB Dial Setback Room Thermostat 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. A mode select button offers an easy method of switching between timed, permanent on or permanent off.

The programmable boost function allows you to extend the programme time in 30-minute increments.

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.

8 ZONE WIRING CENTRE

Part No.	Description
JGUH3	8 ZONE WIRING CENTRE

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.

Zone 8 can be dedicated to a radiator zone by the use of a slide switch which will prevent the UFH pump from running.

JGUH3 can also be used for the control of Energy Saver Radiator Zones. See Page 26.

PROGRAMMABLE ROOM THERMOSTAT

Part No.	Description
JGPRTE	PROGRAMMABLE ROOM THERMOSTAT

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 giving 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.

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

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.

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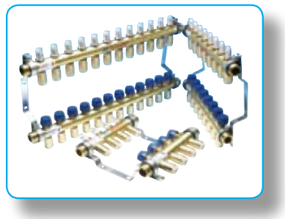
Manifolds



Part No.	Description
JGUFHMAN4	4 ZONE MANIFOLD
JGUFHMAN6	6 ZONE MANIFOLD
JGUFHMAN8	8 ZONE MANIFOLD
JGUFHMAN10	10 ZONE MANIFOLD
JGUFHMAN12	12 ZONE MANIFOLD

Speedfit Manifolds are manufactured from high quality brass to the highest UK and European standards.

A unique feature is that connections to the heating pipes are Speedfit Push Fit, offering much reduced installation time. Flow and return rails are offset and the angles can be altered, all making for an easy installation.

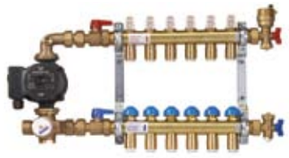
The manifolds are complete with adjustable flow gauge, drain valve and air bleed valve. They are pre assembled on wall brackets and supplied with screws and plugs.

CONTROL PACK

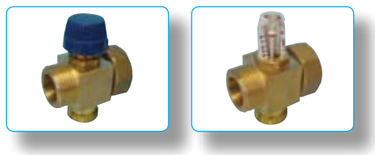
Part No.	Description
JGCONTROL	CONTROL PACK

Hot water is taken from the boiler, mixed to the required temperature and circulated via the manifold to the heating circuits, the temperature and volume of water is constantly altered to maintain the requirements of the system. Flow temperature can be altered by turning the hand wheel on the mixing valve unit.

The pack is light and compact so a wall bracket is not needed and flat face unions make for an easy connection to the manifold.



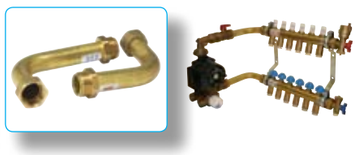
MANIFOLD EXTENSION KIT



Part No.	Description
JGUFHMANEXT	MANIFOLD EXTENSION KIT

Enables a manifold to be extended by one or more zones.

MANIFOLD ELBOW CONNECTOR



Part No.	Description
JGUFHMANELB	MANIFOLD ELBOW CONNECTORS

Enables a Pump Pack and Manifold to be installed at 90° to each other.

Fixing Systems

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.

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.

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.

CONDUIT ELBOW

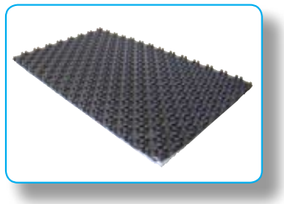
Part No.	Description
JGUFHCONELB	CONDUIT ELBOW

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.

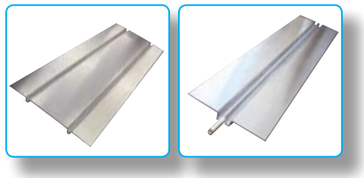
FLOOR PANELS



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 1,000mm 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.

ACTUATOR VALVE

Part No.	Description
JGUFHA(240 v)	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.

Pipe

SPEEDPEX 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

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

Offered in PEX or Polybutylene, Speedfit Pipe has an inner barrier to prevent the ingress of atmosphere, it is manufactured and Kitemarked to British Standard BS7291 : Parts 1,2 & 3: Class S.

It is lightweight and flexible making it especially suitable for underfloor heating installations.

For screed systems, the pipe is attached directly to insulation with staples, floor clips or mounting rails.

Spreader Plates are available for timber flooring using either traditional joists or TJI Joists.

Underfloor Heating for Conservatories and Extensions

SINGLE ROOM CONTROL UNIT

Part No.	Description
JGROOMPACK	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 30m^2.

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.

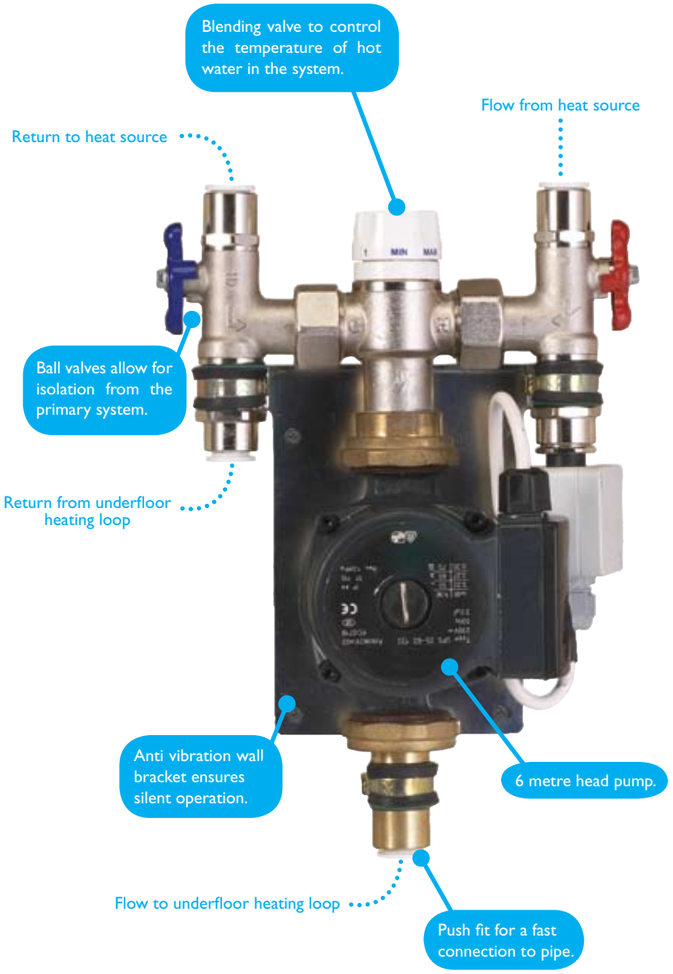
Speedfit recommend connection to the main central heating flow and return distribution system, using a dedicated motorised valve. It is also possible to connect to the nearest radiator supply pipe. If connected to an existing radiator circuit, the pump will be unable to operate independently, only able 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 Pack is 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. Please contact the Technical Help Desk Tel 01895 425333.

Part No.

JGUFHPACK20

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

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

Speedfit®

Installation is Quick and Easy

SOLID FLOOR INSTALLATIONS

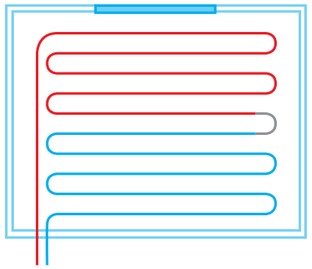
SCREEDS

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.

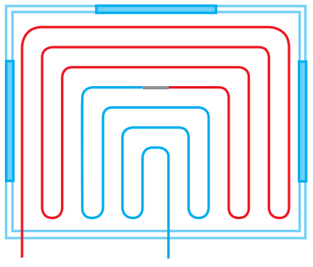
The usual depth of screed is 65 - 75mm thick but it is possible depths can be reduced to assist in improving performance.

PIPE LAYOUT IN SOLID FLOOR INSTALLATIONS

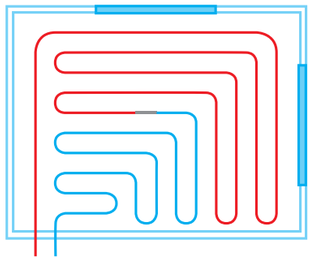
The shape of the room and the position of the outside walls and windows will determine the pattern of the pipe layout. The counterflow pattern is recommended although other options are shown opposite.



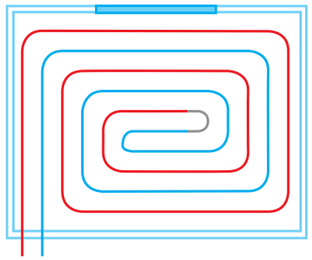
Single Serpentine



Triple Serpentine

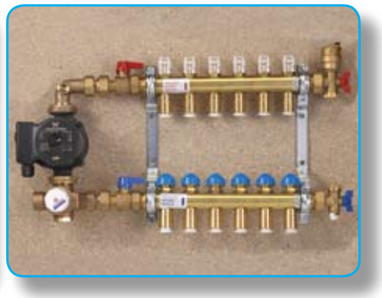


Double Serpentine



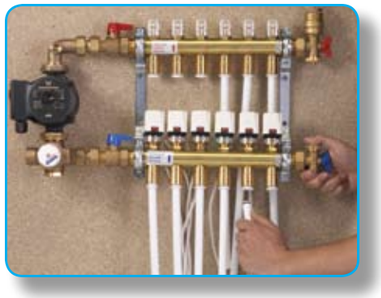
Counterflow

The floor is cleared of dust and debris and insulation is laid across the area.



Fit the Speedfit Manifold to the wall and connect the Pump Pack.

Speedfit pipe is laid in a pre-determined pattern and fixed in position with staples.



Connect the ends of the pipes to the Manifold.

The system is filled and pressure tested.

The screed should be laid whilst the pipe is pressurised.

The underfloor heating system should not be used to dry the concrete screed.

TIMBER FLOOR INSTALLATIONS

Spreader plates are available for timber flooring using either traditional joists or TJI joists. They allow the heat from the pipe to be spread more evenly across the floor.

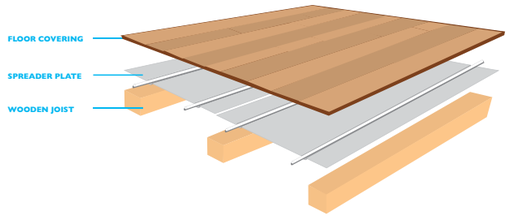
Spreader plates 390mm x 1,000mm and 390mm x 250mm are designed for use with traditional joists at 400mm centres. They are laid across the joists and fixed in place using a staple gun. The 15mm Speedfit Pipe is pushed into the grooves in the plate and the floor decking laid on top.

Spreader plates 165mm x 1000mm can be used with either traditional or TJI joists and with the floor already in place. They are fixed to the underside of the floor using staples or screws.

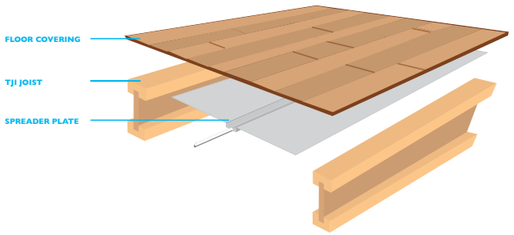
Speedfit pipe is fitted in the grooves of the plates.

Insulation is placed between joists to the underside of the plates.

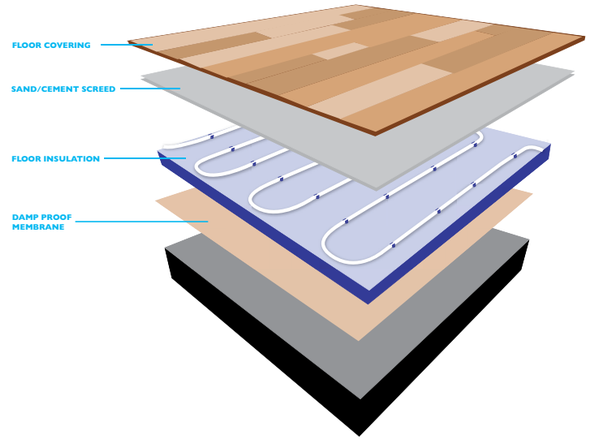
INSTALLATION USING 390mm WIDE SPREADER PLATES



INSTALLATION USING 165mm WIDE SPREADER PLATES



SOLID FLOOR INSTALLATION



The above is intended as a brief guide. For full technical and installation advice please contact our technical helpdesk.

Speedfit®

Manifold Heating System *(Energy Saver)*

MANIFOLD FEED RADIATOR SYSTEM

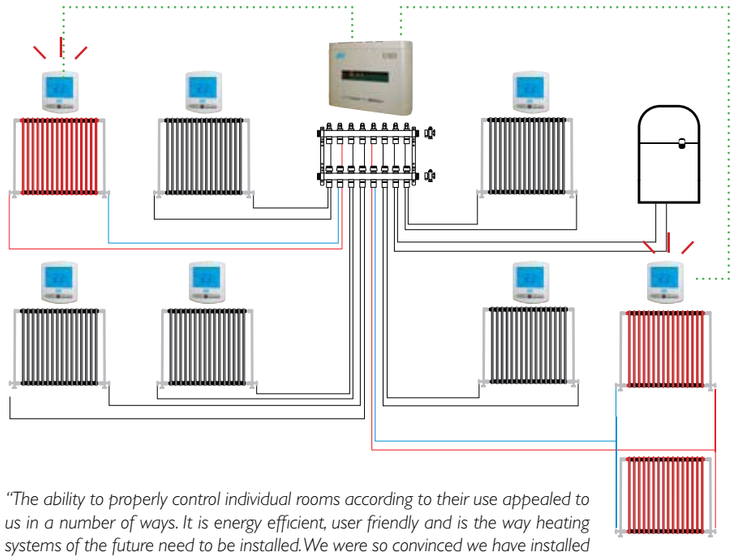
Unlike a conventional system where radiators are connected to a common flow and return controlled by one thermostat, this manifold feed system allows each room to have its own individual hot water supply to its radiators.

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

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

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

There is a range of thermostats to suit individual needs.



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

Steven Vanprag
Summerhouse Point Development Ltd

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

Royston O'Riley
Home owner

FITTINGS AND PIPE

Speedfit offer a full range of Push-fit fittings and pipe to cover any plumbing or heating situation.

Performance specifications are well within those required for most domestic plumbing and heating systems including mains feed cold water systems and vented and unvented hot water systems.

The system is approved by the British Board of Agrément and the Water Regulations Advisory Scheme. Speedfit 'PEM', 'PSE' and 'SFM' Fittings and Speedfit Barrier Pipe are Kitemarked to BS7291 Parts 1, 2, & 3 Class S Licence No KM39767.

Electrical Controls for use with *Energy Saver*

Choose from a range of:

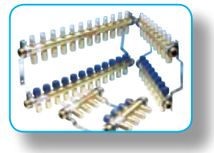
Low Voltage Network Control Products

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

Manifolds



Pipe

SPEEDPEX AND POLYBUTYLENE BARRIER PIPE

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 out doors 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.
- **Collet Clips.** White and Grey collet clips are used with standard fittings to prevent accidental pipe disconnection. Red or blue clips provide colour coding of pipe. Red and blue clips should not be used to prevent accidental release of pipe.
- **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.

John Guest Speedfit Limited
Horton Road, West Drayton, Middlesex UB7 8JL, England.

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www.speedfit.co.uk www.speedfitufh.co.uk
Technical Help Desk: 01895 425333

The company has a policy of continuous research and development and reserves the right to amend without notice the specification and design of all products illustrated in this catalogue. John Guest Speedfit reserve the right to change the colour and shape of products. Photographs are for illustration purposes only.

Subject to our Terms and Conditions of Sale available on request.

Z2105/290/06/10