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more than underfloor

Hydronic underfloor heating systems for over 15 years...

AMBIENTE

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AN INTRODUCTION TO AMBIENTE

Whatever your building type, we are sure we can provide an underfloor heating system to meet your requirements.

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AMBIENTE HAS BEEN TRADING FOR OVER 15 YEARS AND SPECIALISES IN THE DESIGN, MANUFACTURE AND SUPPLY OF HYDRONIC UNDERFLOOR HEATING SYSTEMS.

As the popularity of underfloor heating has grown, we have added and developed many new products and systems to stay at the forefront of the market. We are different from through to project delivery and aftermany of our competitors, in that we focus solely on underfloor heating - this gives you the assurance that your system will perform to the highest standard and that your enquiry will be treated with the highest level of care and attention.

We believe in the importance of supporting our customers throughout the project process - right from initial design and product specification, sales support, our team are on hand to offer realistic and helpful guidance to all parties involved.

We pride ourselves in a wealth of industry knowledge and experience, enabling us to advise on the very best

underfloor heating system for your project. Our wide range of systems includes options for nearly every floor construction and we can cater for many client preferences such as the ability to control the heating from a smartphone.

With the Part L regulation changes and the increased use of ASHP's, we are here to advise and assist you with the supply of wet underfloor heating.

WHY OUR CLIENTS CHOOSE AMBIENTE



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QUOTES WHEN YOU SPEAK WITH THE EXPERTS



QUICKER

THE AMBIPAK SOLUTION









THE ADVANTAGES OF UNDERFLOOR HEATING

COMFORT

Underfloor heating creates a gradual, gentle and even heat, which makes for a comfortable and relaxing environment. In summer months, some systems can be switched to cooling mode, where cool water is circulated around the system – this will only work with some heat sources e.g. a reversible heat pump. Underfloor heating is also silent in its operation, unlike some traditional radiator systems.

INTERIOR DESIGN

As the underfloor heating pipework is concealed within the floor construction, there is nothing to limit interior design, offering a completely flexible room layout.

ENERGY EFFICIENT

Underfloor heating works by radiation and heats from the ground upwards, a much more efficient pattern than the traditional convectional heating, where the warmest part of the room is often at ceiling height.

FLEXIBLE CONTROL

Underfloor heating is typically zoned into different areas, allowing you complete control of the heating in your home. Different rooms can be set to different temperatures, and programmed around the lifestyle of the room user. Ambiente offers the latest technology including the ability to control your heating remotely from your smartphone.

RENEWABLE HEAT SOURCES

Due to the fact that underfloor heating requires much lower flow temperatures than traditional heating systems, it is the perfect match for many of the new, economical heat sources such as air/ground-source heat pumps and solar thermal systems.

A typical underfloor heating system requires a flow temperature of between 40 and 50 degrees, unlike traditional radiator systems which require more like 70-80 degrees.

HEALTH & SAFETY

As underfloor heating systems work by radiation rather than convection, there are fewer drafts and dust movements, which is important for those who suffer from allergies. Also there are no sharp radiators on the wall, which can be hazardous in certain environments.

> Underfloor heating has many advantages, right from initial installation, through to the long term energy bills of the homeowner.

Questions about Part L regulation changes and the benefits of UFH? Call our technical team today on 01707 649 118

AN OVERVIEW OF HOW UFH WORKS...

Heat reaches into every corner of the room with underfloor heating, ensuring there are no cold spots, no hot heads and no cold feet!


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HOW THE SYSTEM HEATS

Heat reaches into every corner of the room with underfloor heating, ensuring there are no cold spots, no hot heads and no cold feet!

This radiant form of heating is much more comfortable than the convected heat provided by radiators which draws cold air across the floor, heating it and then convecting it upwards towards the ceiling.

Underfloor heating works by circulating warm water through a series of continuous loops that are fitted underneath your floor, creating a large radiant surface that heats your room from the floor upwards.

COMPARING UNDERFLOOR HEATING WITH RADIATORS





CAN UNDERFLOOR HEATING BE INCORPORATED INTO ANY FLOOR CONSTRUCTION?

> DO AMBIENTE SYSTEMS HAVE TO **BE INSTALLED BY** PROFESSIONAL **INSTALLERS?**

IS UNDERFLOOR **HEATING MORE EFFICIENT THAN RADIATORS?**

COMMON ARCHITECT/DEVELOPER

Where do I start in specifying underfloor heating on my projects?

Get in contact with Ambiente today we can provide resources and advice, as well as assisting in incorporating the constructions. The most common heating pipework within proposed floor method is to include the pipework constructions. We can also provide case studies and show examples from our wealth of experience.

Does Ambiente deal with the design element of Underfloor Heating?

Yes, Ambiente offers a full UFH CAD design service including pipework layouts, heat output calculations and in installers including product training, some instances heat loss calculations. All design work is carried out to relevant technical back-up. On top of all this, of standards (in particular BS EN1264) and following CIBSE guidelines.

What is the best way to control underfloor heating?

Control is a key element of underfloor heating, as it can make all the difference to the efficiency of the system. As UFH typically takes a longer time than radiators to heat up and cool can assist any plumber in the down, this needs to be taken into account on the programming of the system. Ambiente always recommends advice. the use of a 7-day programmable thermostat, to maximise efficiencies and configure the heating to the lifestyle of the homeowner. There are also other upgrade options, for example smartphone control.



Can underfloor heating be incorporated How can I be sure that my underfloor into any floor construction?

Ambiente provides systems to enable you to include UFH into most floor within the floor screed build-up in the initial stage. However we can also cater **Is underfloor heating more** for joisted, structural, floating, low profile and even wall-heating systems.

What benefits are there for me to use Ambiente over another supplier?

Ambiente provides many benefits to dedicated account manager and full course we offer a fantastic range of quality products with industry-leading warranties and all at competitive prices.

Do Ambiente systems have to be installed by professional installers?

We recommend that all underfloor heating systems are fitted by a competent installer, but Ambiente installation of our systems, through means of training and



heating will not leak beneath the floor?

Ambiente pipework is designed to stringent standards, meaning we can offer a lifetime warranty – giving you complete peace of mind.

efficient than radiators?

In almost all cases, yes, it is more efficient – this is because it utilises lower flow temperatures and works by more gentle radiation of heat rather than convection.

What floor coverings can be laid on top of underfloor heating?

Most floor coverings are suitable for use with underfloor heating, but thought should be given to the resistance of the proposed covering. Tiled floors work very well with underfloor heating as they have a low thermal resistance, with deep-pile carpets being the worst! The resistance of your chosen floor covering will be taken into account at design stage, to make sure it is suitable for use.

UFH DESIGNS

HERE AT AMBIENTE WE OFFER A COMPLETE UNDERFLOOR HEATING CAD DESIGN SERVICE FOR YOUR PROJECTS INCLUDING PIPE LAYOUTS, HEAT OUTPUTS AND OPTIONAL HEAT LOSS CALCULATIONS.

Having our own design team means that we can offer a quick and flexible approach, ensuring that there are no unnecessary delays to your project programme. We work closely alongside the architect and/or consultant to ensure that the system we propose

kitche

M2 - Loop 6

M2 - Loop 7 dining

M2 - Loop 3

AMBIENTE UFH DESIGNS - WHAT IS INCLUDED...

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Pipe Allocation					
Room	Manifold	Port	Lengt		
Bedroom2	1	1	35		
Master Bedroom/Ensuite	1	2	65		
Hall / Bathroom	1	3	32		
Kitchen/Dine/Living	1	4	59		
Kitchen/Dine/Living	1	5	43		
Bedroom 3	1	6	34		



In order to carry out a UFH design, we will require clear layout plans and typically we would be contacting you for some additional information as shown:

THE HEAT SOURCE AND THE FLOW TEMPERATURE THAT CAN BE ACHIEVED

LOCATION OF MANIFOLD(S)

PROPOSED FLOOR COVERINGS AND APPLICABLE

1. PIPE LAYOUTS

We plot the actual positions of the pipework within the floor, to show the pipework for each individual area, installer the exact pattern to work to.

2. PIPE SPACING & ALLOCATION

We work out the spacing of the and also an allocation table to show which coils should be used to cover which loops.

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	Underfloor Heating Outputs											
Manifold	Room	Floor Detail	Pipe Diameter (mm)	Room Area (m³)	UFH Area (m²)	Room Design Temperature (°C)	Flow / Return Temperature (°C)	Floor Covering	Floor Covering Resistance (m ^a K/W)	Pipe Spacing (mm)	Design Output (w)	Floor Temp(°C)
1	Kitchen/Dine/Living	AmbiTak	17	19.6	17.1	21	55/45	Ceramic	0.00	200/150	1471	29.0
	Bathroom	AmbiTak	17	2.3	1.2	22	55/45	Ceramic	0.00	150	143	33.0
	Hall	AmbiTak	17	4.6	4.6	18	55/45	Ceramic	0.00	200	547	29.0
	Bedroom 3	AmbiTak	17	5.0	4.6	18	55/45	Carpet	0.15	200/150	547	29.0
	Bedroom 2	AmbiTak	17	5.8	5.4	18	55/45	Carpet	0.15	200/150	643	29.0
	Master Bedroom	AmbiTak	17	10.2	8.8	18	55/45	Carpet	0.15	200/150	1047	29.0
	Ensuite	AmbiTak	17	2.2	1.1	22	55/45	Ceramic	0.00	150	131	33.0
TOTAL				49.7	42.8						4529	

3. THE OUTPUT TABLE

The output table gives the system output data, including the room design temperature, the flow temperature, floor covering and the resulting heat output. This output would then be plotted against the room heatloss to make sure the system is meeting it adequately.

AmbiTak A Floor screed B 17mm Ambiente UFH pipe Tacker staples D Laminated insulation board Border edge insulation Acoustic detail and/or DPM (if required) G Concrete subfloor

4. SYSTEM TYPE

A clear floor section diagram shows which system has been designed.

ORGANISING AND PROCESSING ORDERS HAS NEVER BEEN EASIER. YOUR ORDERS WILL BE DELIVERED IN TWO 'FIXES', WITH YOUR AMBIPAK BEING SENT OUT ALONG WITH THE FIRST FIX.

AN OVERVIEW OF



Our Ambipak folder includes:

Relevant installations guides

Wiring information/diagrams

UFH layout/design

General info sheets

And more!

1st fix

Everything you will need for the initial pipework installation. Items typically consist of:

- Manifold/valves/couplings
- Pump/blender valve
- UFH pipework
- Pipe fixings/clips etc
- Floor sensors

2nd fix

All electrical items. Items typically consist of:

- Thermostats
- Wiring centres
- Actuator valves

AN OVERVIEW OF THE DESIGN AND TECHNICAL



SYSTEM DESIGN

HAVING OUR OWN DESIGN TEAM MEANS

THAT WE CAN BE MUCH MORE FLEXIBLE

QUICKLY ACCOMMODATE ANY ALTERATIONS TO THE LAYOUT AND OTHER REQUIREMENTS.

DURING THE DESIGN STAGE AND CAN

At Ambiente we understand and appreciate how important it is to design your Underfloor Heating System properly. We pay detailed attention to making sure that your system is adequate in terms of being sufficient for the area that you are trying to heat.

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QUOTATIONS

For an accurate quotation, we ask you to send us a copy of your floor plan drawings. Our estimating department will calculate the materials you will need to heat the area required. On receipt of an order, we then produce detailed CAD pipe layouts and heat output calculations.



TECHNICAL SUPPORT

We employ a team of highly trained UFH technicians to answer any queries you may have prior to and during installation. This same team will also provide you with excellent after-sales support, giving you complete peace of mind for the future of your system.





AN OVERVIEW OF COMMISSIONING

A vital part of the installation of any underfloor heating system is the balancing and commissioning stage – normally this takes place once the system is live and before the building is occupied.







+ THIS PROCESS CAN INVOLVE SOME OR ALL OF THE FOLLOWING:

- Setting the flow rate in each loop as per the system design.
- Checking the thermostat in each zone is calling for heat when required, and that this is sending the correct signal back to the wiring centre – in turn firing the pump, boiler enable etc.
- Checking for, and removing, any build-up of air in the system.
- Dosing the system with an inhibitor and biocide, if not done at initial system fill.
- Teaching the system user how the thermostats work and pass over the manuals for future reference.

AMBIENTE OFFERS RESOURCES TO INSTALLERS TO HELP IN THIS PROCESS:

COMMISSIONING CHECKLISTS AND STEP-BY-STEP GUIDES.

MANIFOLD PRESSURE TEST CERTIFICATES AND DOCUMENTATION.

SYSTEM WARRANTY DOCUMENTS TO BE HANDED OVER TO THE HOMEOWNER.

THERMOSTAT MANUALS AND OTHER SYSTEM INFORMATION FOR THE INSTALLER TO HAND TO THE HOMEOWNER.

Questions about commissioning? Call our technical team for support today on 01707 649 118

AMBIENTE **UFH SYSTEMS** heating systems, accommodating nearly every different floor construction and providing for a range of specific building requirements.

Ambiente prides itself in its wide range of underfloor

SCREEDED FLOOR BUSPENDED FLOOR FLOATING FLOOR SYSTEMS SYSTEMS SYSTEMS SPECIALIST **BESPOKE LOW PROFILE** SYSTEMS SYSTEMS SYSTEMS



Have a question about our UFH Systems? Fill in the online form at ambienteufh.co.uk and one of our technicians will

be in touch.



AMBICLIP

THE AMBICLIP SYSTEM IS ONE OF THE MOST COMMON UNDERFLOOR HEATING SYSTEMS PROVIDING A QUICK, FLEXIBLE AND EFFECTIVE FORM OF HEATING WITHIN A SCREEDED FLOOR BUILDUP.

Edge and floor insulation is installed over the subfloor on to which cliprails are then fixed to by both the adhesive backing strip and barbed staples. Once the cliprails are secured in position, the underfloor heating pipework is laid in continuous loops and clipped down in accordance with the underfloor heating design drawings. Once complete, the system is pressure tested with either air or water to check for any leaks - either due to damage to pipework, or a loose connection at the manifold.

We recommend that the screeding process is scheduled to follow shortly after installation to avoid leaving the system vulnerable to damage. If a liquid screed is being used, the insulation must first be sealed to provide a watertight base.

TYPICAL SYSTEM COMPONENTS

Manifold (inc. Isolation Valves, Air Vents etc) // Relevant Pipe Couplings // Pumpset/Blender Unit // 17mm UFH Pipe // Pipe Support Bends // Cliprails // Cliprail Clips // Border Edge Insulation

Please Note: This list is only intended as a guide and doesn't include any electrical items. Full lists and recommended quantities can be found on our website.

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AMBITAK

THE AMBITAK SYSTEM IS QUICK AND FLEXIBLE, PROVIDING AN EVEN AND EFFECTIVE FORM OF HEATING WITHIN A SCREEDED FLOOR BUILDUP.

UFH pipework is typically clipped to a laminated EPS sheet (25mm minimum), which has a printed grid to help the installer achieve the correct pipe spacings. Tacker staples are fed from a specialist tool through the laminate layer and into the EPS insulation - the staples are barbed to give a good fixing that will withstand the flex of the pipe. Once complete, the system is pressure tested with either air or water to check

for any leaks - either due to damage to pipework, or a loose connection at the manifold.

We recommend that the screeding process is scheduled to follow shortly after installation to avoid leaving the system vulnerable to damage. If a liquid screed is used, the insulation must be sealed to provide a watertight base.

TYPICAL SYSTEM COMPONENTS

Manifold (inc. Isolation Valves, Air Vents etc) // Relevant Pipe Couplings // Pumpset/Blender Unit // 17mm UFH Pipe // Pipe Support Bends // Tacker Clips // Border Edge Insulation

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For a free quotation and technical support visit ambienteufh.co.uk



AMBICLIP (BISCUIT SCREED)

THE BISCUIT SCREED SYSTEM PROVIDES AN ECONOMICAL MEANS OF INCORPORATING UFH, WHILE ALSO OFFERING EXCELLENT OVERALL HEAT OUTPUT.

This system can be used on ground or upper floors, and involves laying a thin layer of screed over UFH pipework clipped to insulation, between battens or joists. It is only possible to get away with such a thin screed layer (as little as 25mm) as it is not forming a structural slab – just used to fill in between the battens/joists.

The only disadvantage of this system is that it does introduce a 'wet' trade with the screed, which can especially be challenging on upper floors.

Consideration should also be taken for the weight that the screed adds to the overall floor loading.

TYPICAL SYSTEM COMPONENTS

Manifold (inc. Isolation Valves, Air Vents etc) // Relevant Pipe Couplings // Pumpset/Blender Unit // 17mm UFH Pipe // Pipe Support Bends // Cliprails // Cliprail Clips

Please Note: This list is only intended as a guide and doesn't include any electrical items. Full lists and recommended quantities can be found on our website

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AMBISTRUCTURAL

THE AMBISTRUCTURAL SYSTEM IS USED WHERE **UFH IS REQUIRED TO BE INCORPORATED INTO A** STRUCTURAL FLOOR BUILDUP.

Typical scenarios are airport hangers and car showrooms, where point loading can be extremely high. High density flooring insulation panels also be used for driveway heating and of the required specification are laid over the complete floor area which is overlaid with a reinforcing mesh onto which the underfloor heating pipework is clipped or tied. Once complete, the system is pressure tested with either air or water to check for

any leaks - either due to damage to pipework, or a loose connection at the manifold. This form of heating can other external applications. In these situations it is critical that the system is dosed with an anti-freeze mix to prevent damage to pipework in cold weather.

TYPICAL SYSTEM COMPONENTS

Manifold (inc. Isolation Valves, Air Vents etc) // Relevant Pipe Couplings // Pumpset/Blender Unit // 17mm UFH Pipe // Pipe Support Bends // Reinforcing Mesh (normally supplied by others) // Zip Ties // Border Edge Insulation

Please Note: This list is only intended as a guide and doesn't include any electrical items. Full lists and recommended quantities can be found on our website.



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AmbiCastellated Plain Panel option, laid on others' insulation

AMBICASTELLATED

THE AMBICASTELLATED SYSTEM IS AN ALTERNATIVE METHOD OF INCORPORATING UFH INTO A SCREEDED FLOOR, OFFERING A FLEXIBLE AND NEAT INSTALLATION METHOD WITHIN THE PRE-FORMED PLASTIC PANELS.

The panel is a moulded plastic panel, with an overall depth of 20mm - the 'castles' are spaced at 50mm intervals provide a consistent fixing point and enabling a fast and neat pipework installation. Panels can either be supplied plain, or with an EPS insulation backing.

The castellated system has two further benefits over a traditional clip system:

TYPICAL SYSTEM COMPONENTS

- The plastic panels act as a separating layer, meaning that additional DPM layer is not necessary.
- The castles protect the pipework prior to screeding - especially important if screeding is a while after initial installation (of course we always recommend that screeding takes place ASAP after installation).

Manifold (inc. Isolation Valves, Air Vents etc) // Relevant Pipe // Couplings // Pumpset/Blender Unit // 17mm UFH Pipe // Pipe Support Bends // Castellated Floor Panels // Border Edge Insulation

Please Note: This list is only intended as a guide and doesn't include any electrical items. Full lists and recommended quantities can be found on our website.

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AMBIPLATE 20

THE AMBIPLATE 20 SYSTEM IS DESIGNED TO SUIT BATTENED FLOOR BUILDUPS BUT CAN BE EASILY ADAPTED TO SUIT SPRUNG SPORTS FLOORS, ACOUSTIC BATTEN FLOORS AND OVER-BATTENED FLOORS.

Before the underfloor heating system is installed, insulation should be laid between the battens and should be laid as close as possible to the underside of the pipework to maximise heating output. The system consists of aluminium diffuser plates being fixed directly on to the battens. The plates contain grooved channels into which the underfloor heating pipework is installed in continuous lengths and piped back to the underfloor heating manifold.

The reflective properties of the aluminium diffuser plates mean that any heat is efficiently pushed up through the sub-floor layers for maximum heat output. The nature of the system means that it has a quicker response than a traditional (screed) UFH system.

TYPICAL SYSTEM COMPONENTS

Manifold (inc. Isolation Valves, Air Vents etc) // Relevant Pipe Couplings // Pumpset/Blender Unit // 17mm UFH Pipe // Pipe Support Bends // Aluminium Diffuser Plates // Clout Nails and Pipe Clips

Please Note: This list is only intended as a guide and doesn't include any electrical items. Full lists and recommended quantities can be found on our website.







AMBIPLATE 30

THE AMBIPLATE 30 SYSTEM IS DESIGNED FOR USE ON JOISTED FLOOR SYSTEMS, TYPICALLY FOR FIRST FLOOR APPLICATIONS.

Before the system is installed, the joist void should be insulated - typically with a mineral wool type insulation, but also commonly with a 'board' type insulation supported by battens. In both cases, it is important that the insulation layer is pushed up tight to the underside of the plates to maximise heat output and minimise downward loss. The aluminium diffuser plates are then installed, fixed to either side of the joist void. The aluminium plates

can only be laid on straight pipe runs and typically cover about 80% of the heated floor area. The pipework is then installed into the diffuser plates as per the installation drawings. The reflective properties of the aluminium diffuser plates mean that any heat is efficiently pushed up through the sub-floor layers for maximum heat output. The nature of the system means that it has a quicker response than a traditional (screed) UFH system.

TYPICAL SYSTEM COMPONENTS

17mm UFH Pipe // Manifold // Manifold Couplings // Isolating Ball Valves // Manifold Tag // Pipe Bends // Pumpset/Blender Unit // Aluminium Diffuser Plates // Clout Nails and Pipe Clips

Please Note: This list is only intended as a guide and doesn't include any electrical items. Full lists and recommended quantities can be found on our website.

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AMBIPLATE 80

THE AMBIPLATE 80 SYSTEM IS A UNIQUE AND INNOVATIVE SYSTEM, ALLOWING INSTALLATION FROM BENEATH THE FLOOR LAYER.

The AmbiPlate 80 system is another member of the AmbiPlate range, allowing installation of the system from underneath - ideal for retro-fit scenarios when the floor finish is already in place (section A opposite).

The system can also be fitted from above, where the plates are laid across the floor joists (section B opposite). It is important as with all plated systems that joist void is well insulated - normally 100mm of mineral wool type insulation. The reflective properties of the aluminium diffuser plates mean that any heat is efficiently pushed up through the sub-floor layers for maximum heat output. The nature of the system means that it has a quicker response than a traditional (screed) UFH system.

TYPICAL SYSTEM COMPONENTS

Manifold (inc. Isolation Valves, Air Vents etc) // Relevant Pipe // Couplings // Pumpset/Blender Unit // 17mm UFH Pipe // Pipe Support Bends // Aluminium Diffuser Plates // Clout Nails and Pipe Clips

Please Note: This list is only intended as a guide and doesn't include any electrical items. Full lists and recommended quantities can be found on our website.

Structural sub-floor layer Aluminium diffuser plate (Fitted either between joists or over joists) 17mm Ambiente UFH pipe Mineral wool insulation Suspended timber floor joists Section A Section B

For a free quotation and technical support visit ambienteufh.co.uk



18mm Overlay Variant

AMBICHIPBOARD

THE AMBICHIPBOARD SYSTEM IS A UNIQUE **COMBINATION OF A STRUCTURAL FLOOR** SOLUTION, WHILE INCORPORATING UNDERFLOOR HEATING.

It consists of high grade moistureresistant tongue and groove chipboard panels, that are pre-routered to take 12mm UFH pipework. Pipework channels are routed typically at 150mm spacings, with radius returns and transit channels to facilitate installation Often the tail/transit pipework is run beneath the floor in the joist void to minimise the need for any

further routing of the boards. Ambiente recommend the use of a 6mm ply (or cement-based alternative) to be laid over the system before laying the floor finish.

TYPICAL SYSTEM COMPONENTS

Manifold (inc. Isolation Valves, Air Vents etc) // Relevant Pipe Couplings // Pumpset/Blender Unit // 12mm UFH Pipe // Pipe Support Bends // AmbiChipboard Flooring Panels // 12mm Pipe Clips

Please Note: This list is only intended as a guide and doesn't include any electrical items. Full lists and recommended quantities can be found on our website.

For further information call our sales team on 01707 649 118

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AMBIFLOAT 10

THE AMBIFLOAT 10 SYSTEM IS A FULLY FLOATING FLOOR SYSTEM, WHICH CAN BE USED IN NEW **BUILD AND RETRO-FIT INSTALLATIONS.**

The installation involves covering the complete floor area with AmbiFloat 10 panels and where necessary using battens to provide extra support to door thresholds or perimeter edging. The UFH pipework is then run into the grooved panels, in continuous loops which start and finish at the manifold. The system is finally overlaid with a fully The reflective properties of the floating floor deck onto which your final floor finish is applied. In retrofit situations, some wood flooring can be the sub-floor layers for maximum heat laid directly on top of the insulation panels to minimise floor build-up but this needs to be a minimum of 18mm T+G board and must be fitted

immediately after the UFH system has been installed. Please note that you should always check with the flooring manufacturer before laying directly onto UFH systems, as some will insist that their products should not come in direct contact with the UFH pipework.

aluminium foil face means that any heat is efficiently pushed up through output. The nature of the system means that it has a guicker response than a traditional (screed) UFH system.

Structural sub-floor layer 17mm Ambiente UFH pipe Grooved and foiled insulation board Acoustic detail (if required) - Damp proof membrane (if required) Concrete floor

AmbiFloat 10 or joisted floor

TYPICAL SYSTEM COMPONENTS -

Manifold (inc. Isolation Valves, Air Vents etc) // Relevant Pipe Couplings // Pumpset/Blender Unit // 17mm UFH Pipe // Pipe Support Bends // AmbiFloat 10 Insulation Panels // Aluminium Tape

Please Note: This list is only intended as a guide and doesn't include any electrical items. Full lists and recommended quantities can be found on our website.



AMBIFLOAT 20

THE AMBIFLOAT 20 SYSTEM PROVIDES A FLEXIBLE AND EFFECTIVE FORM OF HEATING WITHIN BATTENED FLOOR BUILDUPS.

The installation involves laying the AmbiFloat 20 insulation panels between the battens over the entire floor area. The UFH pipework is then run into the grooved panels, in continuous loops which start and finish at the manifold. In order to run the pipework from one channel to the next, the batten will need to be notched at one end. A structural board is then fixed over the battens and the floor finish will be laid on top of this. The reflective properties of the aluminium foil face means that any heat is efficiently pushed up through the sub-floor layers for maximum heat output. The nature of the system means that it has a quicker response than a traditional (screed) UFH system.

TYPICAL SYSTEM COMPONENTS

Manifold (inc. Isolation Valves, Air Vents etc) // Relevant Pipe Couplings // Pumpset/Blender Unit // 17mm UFH Pipe // Pipe Support Bends // AmbiFloat 20 Insulation Panels // Aluminium Tape

Please Note: This list is only intended as a guide and doesn't include any electrical items. Full lists and recommended quantities can be found on our website.

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AMBIFLOAT 30

THE AMBIFLOAT 30 SYSTEM IS DESIGNED FOR USE ON JOISTED FLOOR SYSTEMS, TYPICALLY FOR FIRST FLOOR APPLICATIONS.

Similar in principle to the AmbiFloat 20 system, but designed for joisted applications, the installation involves laying the AmbiFloat 30 insulation panels between the joists over the entire floor area. The panels will typically need supporting with a timber batten, or purpose made metal clip. The UFH pipework is then run into the grooved panels, in continuous loops which start and finish at the manifold. In order to run the pipework from one joist void to the next, the joist will need to be notched at one end. A structural board is then fixed over the joists and the floor finish will be laid on top of this.

The reflective properties of the aluminium foil face mean that any heat is efficiently pushed up through the sub-floor layers for maximum heat output. The nature of the system means that it has a quicker response than a traditional (screed) UFH system.



AmbiFloat 30 with EPS insulation type

TYPICAL SYSTEM COMPONENTS -

Manifold (inc. Isolation Valves, Air Vents etc) // Relevant Pipe Couplings // Pumpset/Blender Unit // 17mm UFH Pipe // Pipe Support Bends // AmbiFloat 30 Insulation Panels // Aluminium Tape

Please Note: This list is only intended as a guide and doesn't include any electrical items. Full lists and recommended quantities can be found on our website.

For a free quotation and technical support visit ambienteufh.co.uk



AMBILOWBOARD SRB

AMBILOWBOARD SRB IS A GROOVED CEMENT BOARD SYSTEM, PART OF OUR LOW-PROFILE RANGE, IDEAL FOR RETRO-FIT SCENARIOS.

This system is designed for hard floor finishes such as tiles and wood flooring, which can be laid directly on top of the installed system. The boards are supplied in two pre-routered panels - straight boards and return panels, depending on the configuration of the pipework pattern.

The cementitious nature of the board gives it a low thermal resistance, which allows for a good and even spread of heat through the floor. The AmbiLowboard SRB system must be laid on a flat, level and solid base, in order to give a consistent surface on which to lay floor coverings. Note that floor finishes such as carpet and vinyl cannot be laid directly onto this system for point-loading reasons - in this scenario an additional layer (normally a 6mm plywood) needs to be laid over the system before the floor finish is laid. We recommend bonding it down, rather than mechanically fixing, to avoid damage to the pipework

TYPICAL SYSTEM COMPONENTS

Manifold (inc. Isolation Valves, Air Vents etc) // Relevant Pipe Couplings // Pumpset/Blender Unit // 12mm UFH Pipe // Pipe Support Bends // AmbiLowboard SRB Floor Panels // AmbiLowboard SRB Adhesive // AmbiLowboard SRB Screws // 12mm Pipe Clips

Please Note: This list is only intended as a guide and doesn't include any electrical items. Full lists and recommended quantities can be found on our website.

ground floor

AMBILOWBOARD EPS

AMBILOWBOARD EPS IS A GROOVED POLYSTYRENE BOARD SYSTEM, PART OF OUR LOW-PROFILE RANGE, IDEAL FOR RETRO-FIT SCENARIOS.

The installation involves covering the complete floor area with AmbiLowboard EPS panels and where necessary using battens to provide extra support to door thresholds or perimeter edging. The UFH pipework is then run into the grooved panels, in continuous loops which start and finish at the manifold. The system is finally overlaid with a fully floating floor deck onto which your final floor finish is applied. In retrofit situations, some wood flooring can be laid directly on top of the insulation panels to minimise floor build-up - but this needs to be a minimum of 18mm T+G board and must be fitted immediately after the

UFH system has been installed. Please note that you should always check with the flooring manufacturer before laying directly onto UFH systems, as some will insist that their products should not come in direct contact with the UFH pipework.

The reflective properties of the aluminium foil face mean that any heat is efficiently pushed up through the sub-floor layers for maximum heat output. The nature of the system means that it has a quicker response than a traditional (screed) UFH system.

TYPICAL SYSTEM COMPONENTS

Manifold (inc. Isolation Valves, Air Vents etc) // Relevant Pipe Couplings // Pumpset/Blender Unit // 12mm UFH Pipe // Pipe Support Bends // AmbiLowboard EPS Insulation Panels // Aluminium Tape

Please Note: This list is only intended as a guide and doesn't include any electrical items. Full lists and recommended quantities can be found on our website.



For a free quotation and technical support visit **ambienteufh.co.uk**



AMBIDECK 18

AMBIDECK 18 COMBINES A LOW-PROFILE UFH SYSTEM WITH EXCELLENT PERFORMANCE AND THE ABILITY TO LAY TILES DIRECTLY OVER!

AmbiDeck 18 consists of a high-density Over a concrete floor, we recommend XPS insulation panel, 18mm thick. The face of the panel is cement-coated, combed layer of flexible tiling adhesive. making it rigid and durable. It is grooved Over a timber floor, we recommend to take 12mm UFH pipework, with a radius return grooved into each panel, making the panel universal. Additional pipework channels can easily be routed/grooved into the panel.

AmbiDeck 18 must be laid onto a flat and level subfloor, which can either be finish being installed. concrete or timber based.

TYPICAL SYSTEM COMPONENTS

laying the AmbiDeck 18 panels over a securing the panels down with screws, using the AmbiDeck washers.

Tiles and wood flooring can be laid directly over this system. Other finishes such as carpets or vinyl will require an intermediate board layer, prior to the

Manifold (inc. Isolation Valves, Air Vents etc) // Relevant Pipe Couplings // Pumpset/Blender Unit // 12mm UFH Pipe // Pipe Support Bends // AmbiDeck Insulation Panels // AmbiDeck washers // AmbiDeck screws

Please Note: This list is only intended as a guide and doesn't include any electrical items. Full lists and recommended quantities can be found on our website.

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AMBISOLO

THE AMBISOLO SYSTEM IS A LOW PROFILE CASTELLATED UNDERFLOOR HEATING SYSTEM, DESIGNED FOR RETRO-FIT PROJECTS.

The system incorporates a 12mm Ambiente underfloor heating pipe within a plastic castellated panel, which is then covered with 20mm of reinforced levelling compound. The way that this system is designed means that it must be laid directly onto a structural and level sub-floor, not onto any loose flooring or insulation layer. This can be a concrete sub floor or chipboard floor, but it must

be a structural layer as the 20mm compound is not structural in its own right. AmbiSolo has many unique benefits over other retro-fit UFH systems. The installation method is flexible and guick compared to grooved board systems. Also the heating response time is rapid, heating up in 15-30 minutes (depending on floor covering), very similar to the response time of a radiator.



TYPICAL SYSTEM COMPONENTS

Manifold (inc. Isolation Valves, Air Vents etc) // Relevant Pipe Couplings // Pumpset/Blender Unit // 12mm UFH Pipe // Pipe Support Bends // AmbiSolo Floor Panels // Levelling Compound

Please Note: This list is only intended as a guide and doesn't include any electrical items. Full lists and recommended quantities can be found on our website.

DID YOU KNOW WE DO... BESPOKE SYSTEMS

Ambiente offers the unique service of manufacturing bespoke systems to cater for any unusual or demanding requirements.

Our design team will be happy to assist you in your project and work with you to come up with the best system to meet your needs.

RECOMMENDED HEAT SOURCES

Ambiente underfloor heating systems can be used in conjunction with many heat sources from conventional boilers, through to the latest efficient methods such as heat pumps, biomass boilers and solar thermal systems.

While Ambiente doesn't supply heat sources, we can assist in recommending, or working with the chosen supplier to make sure our system matches the project requirements.

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Have a question about our bespoke systems? Fill in the online form at ambienteufh.co.uk and one of our technicians will be in touch.





AMBISOLO BEDFORDSHIRE PROPERTY

Underfloor heating is an appealing and sustainable choice for residential properties and developments — from new builds to retrofits. Ambiente supplied the AmbiSolo low-profile underfloor heating system to an installer working on a detached 5-bedroom home retrofit project in Bedfordshire.

This residential retrofit project involved removing the floating floor currently installed at the property and replacing it with a solid tile floor. Increasing the floor buildup too significantly was a real concern of the client and installer, and a solid floor was too deep for overlay boards.

The installer needed to find a UFH system that would keep floor height at a minimum without compromising on heat output. It was decided that a low-profile screed system would be used over a DPM and thin insulation, and the AmbiSolo system was supplied.

The AmbiSolo low-profile underfloor heating system is specifically designed for refurbishment projects where floor buildup is at a premium. It incorporates a 12mm Ambiente underfloor heating pipe within a plastic castellated panel.

Underfloor heating was installed throughout the home in separate rooms on the same pipe network. The layout needed to offer consistent and even heat all over while covered by tiles. With exceptional response times and heat output of up to 120W/m2, this was no problem for AmbiSolo.

Even though the screed application on this project was thicker than the standard recommendation, the contractor remarked about the AmbiSolo being a "brilliant system" with "very good output".

The tiled floor sits perfectly atop the screeded system, and the UFH system will improve the comfort and energy efficiency of this beautiful home.





AMBIENTE **PRODUCTS**

AMBIENTE SUPPLIES A FULL SUITE OF UNDERFLOOR HEATING AND RELATED PRODUCTS, THE FULL LIST OF WHICH CAN BE FOUND IN OUR TRADE PRICE LIST.

At Ambiente we pride ourselves in quality products that are sourced sustainably. We take the approach that 'only the best will do' and all of our products are subject to stringent testing before they are accepted into our range.

Our PE-RT Pipe and Stainless Steel Manifolds are both manufactured in Germany, with our controls sourced from reputable UK suppliers.

UFH PIPEWORK



GROOVED BOARD PRODUCTS







AMBIENTE **UFH PIPE**

Ambiente underfloor heating pipework is known and favoured by installers throughout the UK for its specification by our technicians and manufactured in Germany to the highest

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THE AMBIENTE UNDERFLOOR **HEATING PIPE RANGE**



LIFETIME PIPEWORK WARRANTY



PE-RT stands for 'polyethylene at raised temperature resistance'. Polyethylene has excellent properties at high pressures and temperatures as well as being very flexible and easy to use. It is non-corrosive and has good resistance to frost, as well as being creep-resistant and has a high impact strength. The outer layer protects the oxygen barrier from mechanical damage and moisture ingress. The EVOH oxygen barrier prevents oxygen diffusion at up to 80°C. This is important with underfloor heating since a floor area laid with pipe creates a large surface area of plastic, making it vulnerable to the ingress of

air, which can lead to system damage if not detected and rectified. The pipe is installed with no joints within the installation, we can supply a straight make a reliable repair.

To make the installer's life easier, we offer pipe de-coilers for all pipe coil sizes – please speak to our sales team for more details.

OUR RANGE OF UFH PIPE INCLUDES:

- + 17mm PE-RT available in 120m, 240m, 700m
- 12mm PE-RT available in 100m, 200m, 500m
- 16mm MLCP available in 100m, 200m and 500m



Questions about the underfloor heating pipe? You may be able to find your answer here, but if not call us on **01707 649 118**



AMBIENTE **MANIFOLDS**

The manifold is the central part of any underfloor heating (UFH) system, where the pipework from each zone converges, and where the supply of hot water from the heat source is fed and sometimes blended.

UFH manifolds can either be used in conjunction with a local pump/ blender unit, or coupled directly to the centrally blended/pumped heat source, especially in the case of an air-source or ground-source heat pump, which will be supplying lower flow temperatures.

Typically UFH manifolds are made out of stainless steel and have the following components:

- Flow meters these are located on the flow bar, controlling the volume of water passing through each UFH loop, measured in litres per minute. They can be adjusted by twisting the meter up or down to increase/ decrease the flow rate.
- Actuator valves these are located on the return bar and are used to open/close the individual heating loop. This can be either controlled manually with the plastic cap supplied or more commonly is

controlled by a thermoelectric actuator valve, which responds to the It is normal to get a drop in pressure 'call for heat' from the corresponding room thermostat.

- Air Vent with the option for a manual or automatic version, the air vent is used to purge the air out of the system that will build up during normal operation. Air vents can also be used during commissioning and routine maintenance stages, when there can also tend to be a build-up of air in the system.
- Fill/drain points are located on both the flow and return bars and are used to fill the system up initially, and to flush the system through to remove air or debris. Sometimes the system may also have to be drained down for emergency or maintenance works. The thread allows for a standard hose connector to be directly connected.
- **Pressure gauge** located on the return bar, this monitors the system to check initially for any loose connections or abnormal drops in pressure when the system is first filled up, which may have been caused by damage to pipework

during installation or screeding. after the initial set-up, but it should maintain at a steady pressure once up and running for a few days, typically between 1-2 bar.

- Isolating ball valves these valves are positioned between the pumpset and the manifold and are used to isolate the UFH system from the primary pipework when reauired.
- Most manifolds have a 3/4" BSP thread for the connection of the pipework loops - the relevant fitting is then supplied for the chosen pipe size – standard UFH pipe sizes are 12mm, 16mm, 17mm and 20mm.

Manifolds are typically supplied in sizes from one port (loop) for small projects, up to 14 ports to serve large areas of heating. It is always best for manifolds to be located in the most central pressure – an important component location possible to the areas they are heating, in order to avoid excessive transit pipework passing through any one area, which can cause uncontrollable heat and result in the feeling of 'patchy' heat underfoot.

AMBIENTE **PUMP/BLENDER UNIT**

On many underfloor heating systems, the water is pumped and blended locally at the manifold. This is done via a combined pump/blender unit, which is fixed to one end of the manifold. Ambiente offer a unique pump/ blender unit, in the form of our new CircoMax – which is completely unique to Ambiente and boasts the following advantages:

- Pump can be rotated through 90 degrees, resulting in a very slim overall profile, which can fit into a manifold cabinet.
- The unit is easily transferable from one side of the manifold to the other (left or right-handed) without the need to adjust or amend the unit.
- It has the latest Grundfos pumping technology in the form of the UPM3 25-70 pump.
- Can pump longer loops than traditional manifold pumpsets. cIncorporated flow temperature gauge on the flow bar.

- Blender valve has a greater temperature setting range from 25-80 degrees, which is a bonus for commissioning and initial set-up, meaning that systems can be left running at a low flow temperature without threatening sensitive floor coverings.
- Ambiente also offer manifold cabinets to incorporate all manifold sizes.



AMBIENTE **CONTROLS**

One of the key parts of any underfloor heating system is often overlooked – that is the CONTROL of the system. Due to the behaviour of underfloor heating, in particular the slower response times, it requires more careful control than a

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THE AMBIENTE UNDERFLOOR **HEATING CONTROLS RANGE**

Below is an outline of the range that we offer - please make contact with our sales team to learn about the full range, including wireless controls and colour options.



DIAL THERMOSTATS

Although the shift in the controls market has been much more towards digital/programmable thermostats, the basic dial models do still have their place. Buildings such as schools, nursing homes and community centres often prefer to stick with a basic dial model, for the ease of the building users.

For maximum efficiency, we would always recommend that a dial thermostat is used in conjunction with a system timeclock, to ensure that the heating system is regulated and operates at required times.

PROGRAMMABLE THERMOSTATS

By far the most popular choice now for underfloor heating is to control with a digital programmable thermostat – not only does this allow controls via smartphones and other the system to operate more efficiently, handheld devices. but it also offers the user more flexibility and means that the heating can be programmed around the lifestyle of the individual.

SMARTPHONE-CONTROL WIRING CENTRES THERMOSTATS

An advance on the digital/ programmable thermostat range has been the introduction of heating

Ambiente offers a range of solutions to cater for these requirements, some of which require a 'hub' unit, others connect directly to your home router. These systems are a cost-effective alternative to a full BMS system and also can be incorporated as a retro-fit upgrade in some circumstances.

This is the central wiring box for the control of the UFH system. The wiring centre receives a signal from the thermostat, which then:

- Opens the relevant heating loop, via the relevant actuator valve(s).
- Opens the zone valve on the primary heating circuit.
- Activates the local manifold pump.
- Sends an 'enable' signal back to the boiler to fire it, if it is not already running.



WIRING DIAGRAMS & ELECTRICAL BACK-UP

AMBIENTE IS COMMITTED TO ASSISTING WITH EVERY PART OF YOUR INSTALLATION INCLUDING THE WIRING OF THE THERMOSTATS AND SENSORS.

We supply the relevant wiring diagrams for the thermostats/wiring centre that you purchase and our technical team are also on-hand to offer step-by-step guidance as required.



SUSTAINABILITY AT AMBIENTE

AT AMBIENTE WE ARE VERY CONSCIOUS OF THE NEED TO PROTECT THE ENVIRONMENT IN WHICH WE WORK AND WE TAKE EVERY POSSIBLE MEASURE TO REDUCE OUR IMPACT AND TO LEAD IN THE SHIFT TO GREENER TECHNOLOGIES.

We are also committed to helping our customers in the drive to reduce energy – not only are our systems efficient and environmentally friendly, but they can also be coupled with renewable energy sources such as air and ground source heat pumps and solar thermal systems. We believe in sourcing our product range in a sustainable manner, so that not only can you rely on a consistent quality, but you can rest assured that our products are manufactured in production facilities that are in keeping with our environmental values.

We bulk up our manufacturing processes to maximise efficiencies and reduce freight costs, as well as creating awareness throughout the organisation of the need to operate in an efficient and responsible manner.

WE CARE FOR THE ENVIRONMENT



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CONTACT AMBIENTE

AMBIENTE GOES BEYOND JUST SIMPLY THE SUPPLY OF UNDERFLOOR HEATING SYSTEMS.

At every stage in the project, we offer advice to all parties, in order to assist in the swift, safe and supportive implementation of your project. For more information on any of our products or to discover more about UFH get in touch with Ambiente today.

telephone 01707 649 118 email info@ambienteufh.co.uk visit www.ambienteufh.co.uk



Join us on social media, search for Ambiente UFH.



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