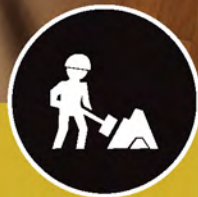


*The underfloor
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Underfloor Heating



Floor Construction



Control Options

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*The underfloor
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*Established in 2004
UFHN successfully
supply the complete
engineered underfloor
heating solution.*



“Our route to market is providing quality innovative project designs, contract managed installations, full commissioning options and quality after sales technical support.”



With over a decade of industry expertise, UFHN are proud to offer an honest and reliable service; designing and delivering quality heating solutions to consultants, architects, local authorities, developers, mechanical and heating engineers right across the UK.



Underfloor Heating



Floor Construction



Control Options

UFHN directly employ Contract Managers, fully trained Install Teams and After Sales Engineers; guaranteeing a professionally run project from beginning to end.

Here are some significant advantages of using UFHN for your next project:

- Project specific design and quotation service.
- Large range of flooring and control options to suit all applications. Including sound-proof robust-detail solutions.
- Product in-stock and delivered direct from our warehouse.
- On-site support (pre and post order).
- Full CAD design bespoke to each project.
- Insurance backed guarantees on all our systems.
- Service contracts direct with clients.
- Screeding and insulation options are available if required.

Underfloor Heating Benefits

Underfloor heating is very much a standard within the heating market. UFHN continue to be at the forefront of the technology providing the most cost effective and energy efficient solutions available.



A well designed underfloor heating system is the most efficient way to provide heating for any property. With even distribution of radiant heat and reduced dust movement, underfloor heating not only offers health benefits and reduced running costs, but also releases valuable wall space, providing complete interior design freedom.



Here are some benefits of using UFH for your next project:

- **Comfort** Underfloor heating provides an even distribution of radiant heat from the ground upwards.
- **Control** With each room temperature being individually controlled by thermostats you get exactly the amount of heat where and when you want it.
- **Costs** Underfloor heating can give you anything from 15% – 40% savings against traditional heating methods.
- **Design freedom** Underfloor heating removes the need for precious wall space typically taken up by radiators, giving you complete design freedom.



Flooring Options

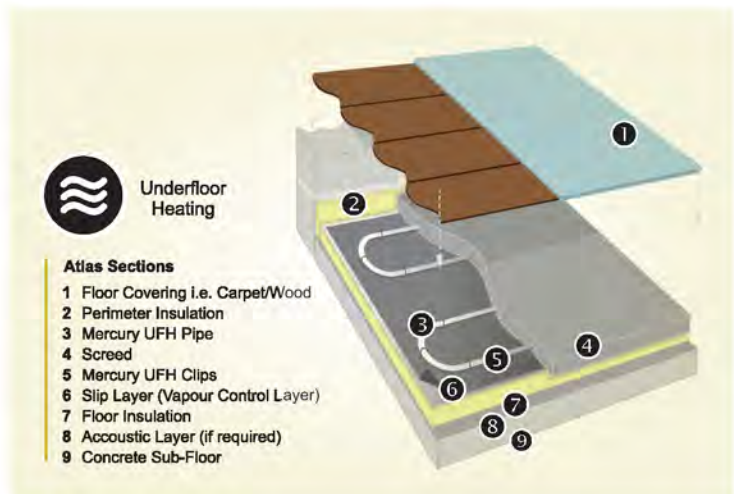
With over 40 proven floor constructions from low profile systems to integration within acoustic detail UFHN has a solution for any project type. Here is a sample of some of the most common floor constructions.



Screeded Floor Constructions

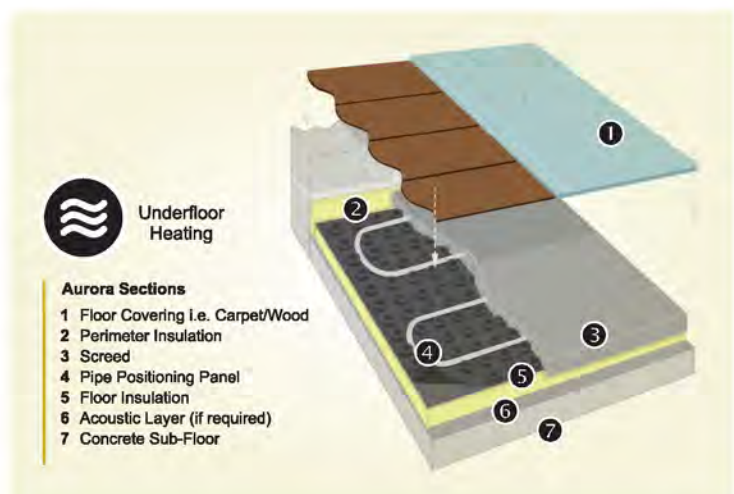
Atlas | The Mercury Atlas floor system is a commonly used underfloor heating system that provides a quick, flexible and simple solution for heating within a screed floor. The pipe used is Mercury P16, M16 or P20 depending on the application, this is held in place by staples with a barbed end to fix into the insulation. Clamptrack can be used to provide additional fixing for the pipe when required (recommended when a flow screed is used).

The UFH pipe is laid in continuous loops, typically clipped to PIR/PUR insulation with a vapour control layer over (as per manufacturer guidelines), a perimeter insulation is required around the walls with either insulation upstands or a foam edging. The pipe and manifold should be pressure tested following installation with the floor screed laid shortly after the UFH installation.



Aurora | The Mercury Aurora floor system uses castellated panels, each panel easily interlocks with one another to create a fixing system for Mercury P16 or M16 pipe that does not require fixings or staples. This floor system is commonly used as a part of a specified acoustic floor detail within flats and houses where it is laid directly onto the acoustic layer. The UFH pipe can be spaced at 50mm intervals enabling easy installation of 16mm Mercury pipe at 150mm and 200mm centres.

The UFH pipe is laid in continuous loops into the pipe positioning panel, a perimeter insulation is required around the walls with either insulation upstands or a foam edging. The pipe and manifold should be pressure tested following installation with the floor screed laid shortly after the UFH installation.



Screeded Floor Constructions

Apollo | The Mercury Apollo floor system is used when insulation has been installed beneath the concrete slab or on intermediate floors. A 4mm Multifoil is laid over insulation or onto the concrete floor with joints taped, a grid is printed on one side of the Multifoil enabling the installer to follow the grid lines for ease of installation. The pipe used can be Mercury P16, M16 or P20 depending on the application.

The UFH pipe is laid in continuous loops fixed into clamptrack with plastic nails and plastic hook nails hammered in after an 8mm hole has been drilled to fix the clamptrack and UFH pipes, a perimeter insulation is required around the walls with either insulation upstands or a foam edging. The pipe and manifold should be pressure tested following installation with the floor screed laid shortly after the UFH installation.



Timber Suspended Floor Construction

Ellipse | The Mercury Ellipse floor system is specifically designed for joisted floor applications and offers a quick response time without raising the floor height. With even heat distribution and high efficiency, Ellipse produces the maximum output possible from a joisted floor system when combined with a high temperature heat source such as a boiler. Ellipse can also be used in conjunction with renewable technologies including ground and air source heat pumps, extra care and attention must be taken to ensure the design temperature and output meets heat loss when using renewables. The pipe used is Mercury P16, M16 or P20 depending on the application, this is held in place by fixing the aluminium heat emission plate to a joist or battened floor above rigid or mineral wool insulation. It is essential for the insulation to be installed as close to the underside of the heat emission plates as possible. Joist or batten centres can be 300mm, 400mm or Junckers Sprung Floors with 411mm centres.

The UFH pipe is laid in to the pre grooved plates in continuous loops, they will follow the floor joist direction and cover approximately 80% of the heated floor area. The pipe and manifold should be pressure tested following installation with the floor deck laid shortly after the UFH installation.



Elara | The Mercury Elara floor system is specifically designed for joisted floor applications. The construction consists of a load bearing slotted 22mm chipboard, which replaces the standard board in floor constructions. Elara offers a quick response time with a minimal increase in floor height; other benefits include efficient and even heat distribution achieving maximum output when combined with an ASHP or boiler. As the UFH pipes are as close to the surface as possible, the resistance is reduced and performance improved against a typical 22mm chipboard construction above the UFH system, the pipe used is Mercury P16 or M16.

The 22mm slotted chipboard is laid across the joists (maximum of 600mm centres), at 90 degrees to the floor joists. This can be temporarily covered for protection if dictated by the type of build. When the build is ready for the UFH, the temporary deck can be removed, the 22mm chipboard cleared of any remaining debris allowing the installation of the supplied aluminium heat emission plates. This is followed by laying the underfloor heating pipes into the plates in continuous loops back to the manifold. There may be a requirement for pipes to drop below the 22mm slotted board to feed back to the manifold. The pipe and manifold should be pressure tested following installation with the floor deck laid shortly after the UFH installation. Following installation please follow the installation or flooring manufacturer instructions for installation, typically a 12mm tongue and groove chipboard or 12mm ply is supplied and laid over the Elara floor system.



Floating Floor Constructions

Hyperion

The Mercury Hyperion floor system is designed to be installed on solid or timber floors. The sub-floor is required to be flat and level to support the grooved floating floor panels. Hyperion offers a level of thermal insulation and can reduce the weight of the building structure. The pipe used is Mercury P16, M16 or P20 depending on the application. The grooved floating floor panels are laid onto the sub-floor, aluminium heat emission plates are then laid into the floating floor panel to cover approximately 80% of the heated floor area followed by the pipe in continuous loops prior to the Timber or ScreedBoard deck being installed. If an acoustic layer is required an additional layer can be supplied to be installed beneath the floating floor panels to meet the projects individual requirements. The pipe and manifold should be pressure tested following installation with the floor deck laid shortly after the UFH installation.



Underfloor Heating

Hyperion Sections

- 1 Floor Covering i.e. Carpet/Wood
- 2 Timber Deck/Collecta ScreedBoard 20
- 3 Mercury UFH Pipe
- 4 Aluminium Heat Emission Plate
- 5 Floating Floor Panel
- 6 Acoustic Layer (if required)
- 7 Chipboard Deck
- 8 Insulation
- 9 Floor Joist



Low Profile Floor Construction

Minitec

The advantage of Minitec is its low installation height. Suitable for most room sizes, Minitec can be installed on any existing screed, timber or tiled floor. The Minitec floor system uses castellated panels, each panel has holes manufactured into the panel to enable the levelling compound to spread and bond firmly with the primed substructure. The rear of the panel has an adhesive back to assist in securing the panel to the floor during installation. Self-adhesive edging strip allows for a seal along the walls and the bottom surface. Mapei Ultralay Renovation Screed is then installed above the raised castellation resulting in a minimum height of just 15mm. After a short drying time the floor coverings can be laid directly to the surface of the levelling screed. As the UFH pipe is just below the top layer, heat-up times are short and the system can be operated at lower water temperatures. The pipe and manifold should be pressure tested prior to the levelling screed being installed.



Underfloor Heating

Minitec Sections

- 1 Floor Covering i.e. Tiles/Carpet/Wood
- 2 Perimeter Insulation
- 3 Renovation Screed
- 4 Mercury 10mm Pipe
- 5 Minitec Panel
- 6 Primer
- 7 Concrete Sub-Floor



Nebula

The Mercury 'Nebula' floor system is a low profile underfloor heating system with a depth of 18mm in total including Mercury P12 pipe.

Nebula is designed for underfloor heating situations where floor build up depth is restricted and can be used in both new build and renovation applications.

The Nebula system is designed to be installed over flooring which is flat and level to enable the Nebula insulation to support the floor finishes on top. The insulation is manufactured using EPS250 with a heat distributing foil over, grooved to take Mercury P12 pipe for even heat distribution. The installation is designed to cover the complete floor area, there may be the requirement for battens i.e. to support door thresholds or perimeter insulation. The pipes are laid in a continuous loop back to the underfloor heating manifold where they are pressure tested. Nebula then has a Screedboard or floating timber floor laid over prior to finished flooring being installed.



Underfloor Heating

Nebula Sections

- 1 Floor Covering i.e. Carpet/Wood
- 2 Screedboard or Timber Flooring
- 3 Mercury P12 UFH Pipe
- 4 18mm Grooved & Foiled EPS250 Floor Panel
- 5 Insulation
- 6 Timber Deck
- 7 Floor Joist

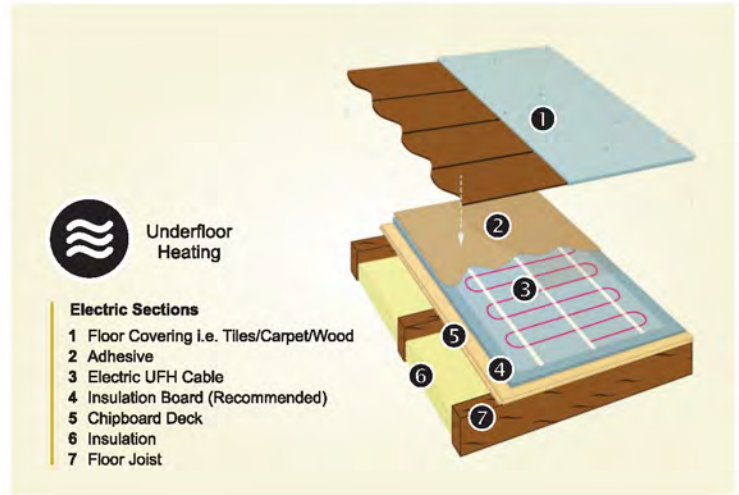


Electric Underfloor Heating

Electric | The UFHN Electric underfloor heating system is a complete solution suitable for new builds, renovations, bathrooms and extensions. Installation is typically on top of a concrete or timber flooring directly underneath your chosen floor finish. A flexible self-levelling compound is applied over the electric mat or cables prior to laying your chosen floor finish. The heat is distributed from flexible heating cables laid in loops over designated floor areas. Insulation is recommended to reduce downward heat loss and maximise the efficiency.

An electric UFH system supplied by UFHN offers a low profile installation and can be installed up to 120w/m² on flammable material and 200w/m² on concrete. The cost of running electric underfloor heating will vary based on various factors such as the level of insulation, heat loss, running temperatures and floor finish resistance.

Each area heated can be thermostatically controlled to give the right amount of heat exactly where you want it. Electric underfloor heating distributes heat radiantly creating an even output throughout the area. This method of heating provides increased comfort and energy savings.



Design Service

The UFHN Design Team produce bespoke layout and electrical drawings for each project. The aim of this process is to ensure the system proposed maximises performance and efficiency, whilst providing clear installation guidelines.

UFHN are regularly specified by consultants and recognised by architects, developers and local authorities as one of the leading, forward thinking businesses in internal climate solutions.

UFHN provide Continuing Professional Development Seminars (CPDs).

Contact us for further details at:
sales@ufhn.co.uk



Control Options

UFHN offer a wide range of thermostats and control options that give complete choice of design, functionality and style.

If you would like to discuss in more detail any of the options available in this brochure, please do not hesitate to call our sales team direct on 01202 894976.



At UFHN we ensure every heating system we supply comes with a sophisticated design and control package.

Types of thermostat and control options at a glance:



Dial Type Thermostats

The dial-type thermostat option is preferred by many clients as it offers a simplistic approach to zoned control through easy adjustment.

Programmable Thermostats

Programmable thermostats allow the end user the ability to adjust temperature, time and control of each individual heating zone.

Intelligent Controls

Internet based and other bespoke intelligent control systems are available.

Weather Compensation

Using sophisticated outdoor temperature measurement our weather compensation system varies the water temperature delivered into the heating system, thereby providing more stable air temperatures for increased comfort, and reductions in energy consumption.

Control Options

Programmable thermostats, wired, wireless & internet based controls



Mercury NeoStat

Programmable Thermostat

The Mercury neoStat offers you a smarter way to control your heating from anywhere!

The neoStat is a 230v powered thermostat with a volt free switch. The neoStat communicates to the neoHub and other neoStats within your home, to create a fully controllable network system of your home heating.

- Stunning design incorporating soft touch keys
- Non Programmable, 5/2 Day, 7 Day and 24 Hour Programming
- 5 Minute Program Intervals
- Self Learning Optimum Start
- 4 Comfort Levels per Day
- Temperature Hold Facility
- Holiday Facility
- Automatic Blue Back Light (Turns off after 30 seconds)
- Flush Mounting
- C/F Selectable
- Key Code Facility
- Frost Protection



Mercury Public

(Tamperproof) Thermostat

The electronic room thermostats FH-WP is a tamper proof model of the FH-WS for use in public environments i.e. schools. The thermostat is used for temperature control in water based underfloor floor heating systems. The thermostat is provided with thermal feedback to improve accuracy. LED behind front cover indicates heat demand. The thermostat is supplied for 24V power supply from the Connection box. Temperature range is 6 - 30°C.



Mercury Slimline

Programmable Room Thermostat

The Mercury Slimline Thermostat is our 230v programmable room stat and programmer in one, providing up to 4 different temperatures at different times of the day.

- Large Display
- Non Programmable, 5/2 day or 7 day programming (selectable in software)
- Self Learning Optimum Start
- 4 Comfort Levels per Day
- Remote Air Sensor Facility (Remote Sensor Optional)
- Temperature Hold Facility
- Holiday Facility
- Automatic Blue Back-Lit Display (Turns off after 30 seconds)
- Flush Mounting
- C/F Selectable
- Key Locking
- Frost Protection



Kanmor 360

Weather Compensation

The Kanmor 360 is designed to optimise comfort and fuel efficiency, the control operates an actuator on a three or four way mixing valve to regulate the supply water temperature. The 360e can maximize efficiency of a condensing boiler or help protect non-condensing boilers from return water temperatures that are too low.



Mercury HTR Dial

Room Thermostat (230V/24V)

The Mercury HTR Dial room thermostat, a straight forward solution for independent zone control. This thermostat is typically used in conjunction with a separate programmer.

- Noiseless switching
- PWM (Pulse-Width-Modulation)
- NSB (Night SetBack) function
- Auto HEAT / COOL changeover
- Cooling blocked function
- Heat cut off at high temperature
- Heat cut off at low temperature



084 Hidden Sensor

The 084 is a 10k Ohm temperature sensor that mounts flush or nearly flush to the wall to give an unobtrusive look and act as a hidden indoor sensor. Since the sensor material is corrosion resistant, finishers are able to plaster or paint over the sensor to match the wall colour. The 084 sensor is ideal for temperature control without a noticeable device on the wall.



Underfloor Heating



Floor Construction



Control Options

Service & Installation

We are a highly reputable service driven company, providing value added service to customers by creating successful partnerships.

- ✓ Project specific design and quotation service.
- ✓ Large range of flooring and control options to suit all applications. Including sound-proof robust-detail solutions.
- ✓ Manufactured in Europe, our UFH pipework carries a 50 year warranty.
- ✓ Product in-stock and delivered direct from our warehouse.
- ✓ On-site support (pre and post order).
- ✓ Full CAD design bespoke to each project.
- ✓ Insurance backed guarantees on all our systems.
- ✓ Service contracts direct with clients.
- ✓ Dedicated Contracts Managers for every project.
- ✓ All installations carried out by our own CSCS qualified engineers.



Underfloor Heating

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Control Options

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