

# Underfloor Heating from Barres

## What is Underfloor Heating and how does it work?



Underfloor heating uses plastic pipes embedded within the floor make-up. Low temperature water is circulated through these pipes which in turn gives off heat to the floor, warming the room.

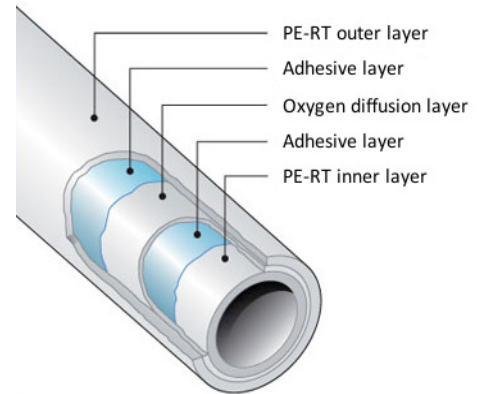
Each room will have one or more circuits of pipe depending on it's size. These circuits are connected back to a central manifold, with each circuit of pipe controlled individually to give the level of control required. A typical underfloor heating system will allow for separate temperature control in each room using individual room thermostats, which control the flow of water using thermal actuators, which are connected to each circuit of pipe.

## Our pipe

The pipe is the most important part of an underfloor heating system. As it's installed within the floor itself, it is critical that a good quality pipe is used that is going to last.

Barres UFH pipe is a 5-layered PE-RT fully plastic pipe, with an oxygen diffusion barrier in the middle, protecting it from damage. Our pipe has been tested to withstand 60°C temperature at 20 bar pressure for over 100 years, and has been used for over 20 years in the UK. Backed by a 50 year guarantee, you can be assured that our pipe is one of the best and most reliable on the market.

The correct amount of pipe at the correct spacing is also critical to the design of a good underfloor heating system. Every Barres underfloor heating system is designed specifically for the project, and the heat source being used.



## Our manifolds



At Barres, we can supply manifolds in a variety of configurations to suit the project and heat source being used.

Our standard manifolds are made from stainless steel and are fully complete with pump, mixing valve, flow meters and ball valves. They also come with filling points and air bleed valves making a complete unit with no additional plumbing required.

Manifolds are also available as simple flow & return units which are ideal for use with heat pump systems which regulate the water separately.

## Our controls

Barres supply as standard, full control for each room in your property, along with a 7-day programmer and night set-back.

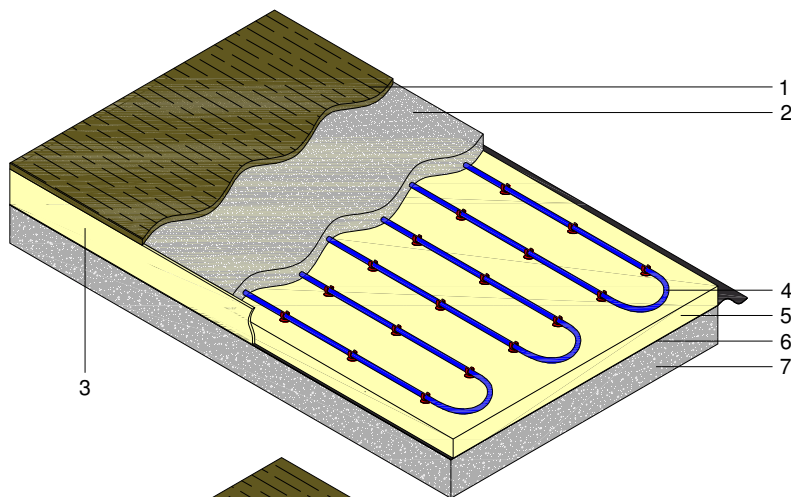
Wiring boxes are also provided as standard to make installation of the electrical work as simple as possible.

A wide range of thermostats are available, from analogue to digital, hard wired to wireless. If you fancy something high tech, we can also supply controls with internet and computer access for controlling your system from wherever you may be.



## What type of floor constructions can be used with Underfloor Heating?

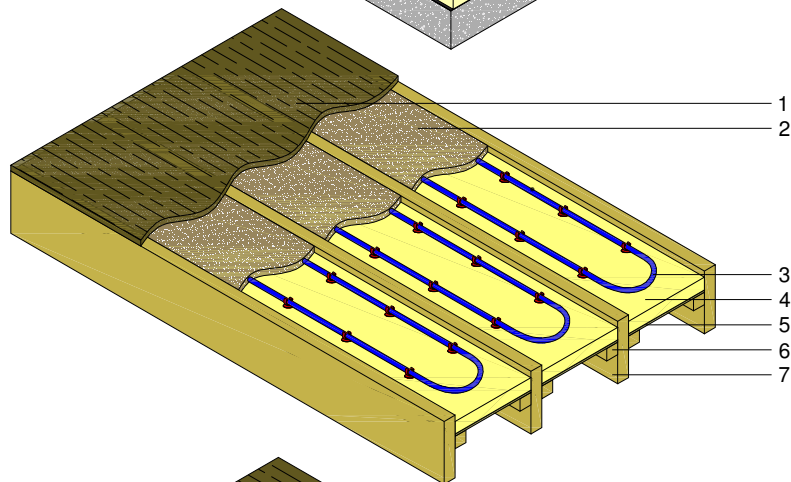
Underfloor Heating can be integrated in to most types of floor constructions. The following examples are three of the most common floor types used with underfloor heating:



### Screed Floor on Insulation

In this floor construction, the pipes are laid on top of insulation and a concrete or self-levelling screed is laid, covering the pipe and creating the finished floor, ready for coverings of your choice.

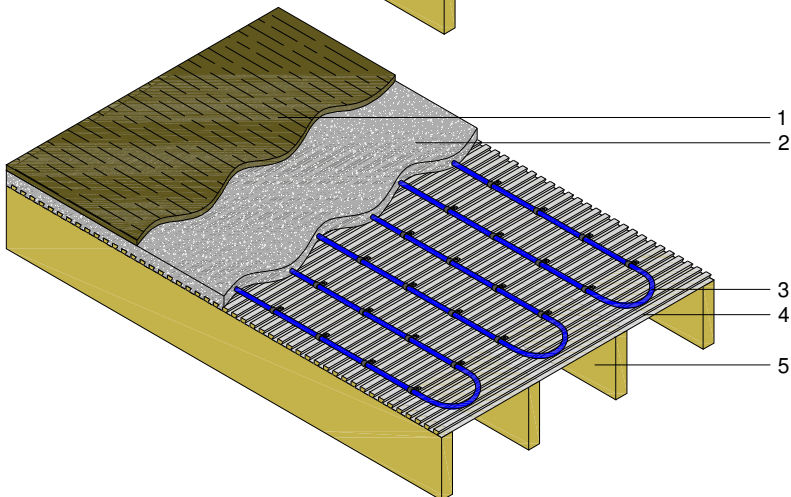
1. Floor covering
2. Minimum 65mm sand/cement or 50mm self-levelling screed
3. Minimum 8mm edge insulation
4. Pipe fixed to insulation with clips
5. Insulation to building regulations
6. Damp-proof membrane
7. Concrete slab



### Joisted Floor with Pipes Between Joists

This floor construction is most commonly used on joisted floors, as it allows installation of the underfloor heating with no change in floor level. Best used with flow temperatures  $>60^{\circ}\text{C}$  due to the chipboard layer between the underfloor heating and the floor covering.

1. Chipboard or hardwood covering
2. 25mm dry sand/cement mix 6:1 (biscuit mix)
3. Pipe fixed to insulation with clips
4. Minimum 25mm rigid board insulation
5. 9mm ply/sterling board
6. 25x25mm battens
7. Joists



### Joisted Floor with Lewis Plates

This floor construction is best for underfloor heating in a joisted floor, when used in conjunction with a heat pump. It converts a typical joisted floor into a solid concrete floor and allows for the best transfer of heat.

1. Floor covering
2. Minimum 35mm (from top of Lewis Plate) sand/cement or self-levelling screed
3. Pipe fixed to Lewis Plates with clips
4. Lewis Plates
5. Joists (with insulation between if necessary)

## Why choose Underfloor Heating from Barres?

At Barres, we design every underfloor heating system individually to suit the project. We take special care when designing the pipe runs and positioning of equipment to make the system as comfortable as possible.

We also take special care when designing underfloor heating for use with heat pumps and other renewables. That is another reason to use Barres for your entire project. We look at the project as a whole, and design the components to compliment each other.

Whether you are designing a new build, a renovation, or just a conservatory, Barres have an underfloor heating solution for the job.

