

Water Under Floor Heating (UFH) Installation

INSTRUCTIONS FOR INSTALLING WOOD FLOORING IN A PLACE WITH WATER UFH IN LINE WITH BRITISH STANDARD BS8201.

Key instructions to be followed :

- Water UFH Elements (pipes) must not be in direct contact with the wooden floor.
 - When Water UFH systems fitted on top of the screed in special mounted panels, a distribution board must be fit on top to ensure even spread of the heat flow under the floor.
 - You must have “flow” control valves to ensure that the temperature never exceeds 26 degrees Celsius.
1. There must be sufficient insulation below the Water UFH and also a good DPM (Dump Proof Membrane) to prevent heat loss and moisture being drawn up through the screed.
- Water UFH system install under screed:
- Where Water UFH system embedded in new screed it is vital to commission the system for at least 3 weeks prior engineered floor delivered to site.
- Once system commission we recommend to gradually increase and build up the heat to highest level for few days. Than after allow the system to cool down in few days till its off. This Interval should take place once again, so in total at least two cycles should take place.
 - The purposes of this exercise is to try releasing any moisture trapped in the screed (as well as testing the Water UFH system).
 - Once the above completed , the screed floor has to “rest” for few days (at least four days) without any artificial drying support (such as Water UFH, Humidifiers, blowers or else)
 - Only then a proper MC Test and reading can be take. A true MC reading must not take If one of the above artificial system is on. This is very important as a true value of MC needed, to ascertain the screed condition.
2. Commissioning an Water UFH system before installing a wooden floor. You must never install a wooden floor before commissioning the system as set out below.
 3. Hot water radiant underfloor heating system must be installed in conjunction with the manufacturer’s guidelines.
 4. The screed must have a moisture content less than 1.8% before the underfloor heating system

is started up. If the screed is 75mm then in normal weather conditions this will take at least 75 days to cure and dry out.

PLEASE NOTE

Heat controllers must be fitted on the water valve to control the maximum heat of the water in the pipes. This is the thermostat that control the water temperature output and not the one that control the room temperature.

- if the water UFH pipes are under 50-70mm of screed the heating valve should be at max 40°
- if the water UFH pipes are exposed (not under screed and fitted on top of the screed in special mounted panels)the heating valve should be at max 30°

Acclimatization of wooden flooring to be laid on top of Water UFH

Before starting the installation, engineered floor boards need to be brought into the room where they will be installed after the 21-day initial running period, and exposed to the climatic conditions when the Water UFH surface temperature is 21-22 degrees Celsius.

The acclimatisation will comprise:

- all wet trades must have finished and screeds dry with moisture levels below 1.8% and humidity below 55%
- leaving the boards in their cartons
- storing the boards for at least 7-14 days
- the boards should be laid flat at least 300mm from the nearest wall
- there must be some battens under the bottom layer of cartons so that air can circulate
- the room temperature must be at least 21-22 degrees Celsius for 7-14 days
- the floor surface temperature must be a minimum of 21 degrees Celsius
- the air relative humidity must be between 40% and 65%.

Installation over electrical under floor heating systems will invalidate WARRANTY!

Critical | The surface temperature of the screed must never exceed 26 degrees Celsius.

Water UFH with plastic or metal pipes:

If you are laying wood flooring on top of plastic or metal UFH water pipes which are not cover with screed or plywood, leaving them exposed and in direct contact with the wood flooring it is a must to lay in between them a solid underlay (without wholes) with an aluminium foil to avoid direct contact and to help spread evenly the heat and eventually damage the floor.

Important | Moisture levels in newly built premises are often still high when parquet floors are installed.

To avoid damage it is important that the relative humidity during and after installation is below 60%. The floor boards may be permanently deformed if their relative humidity exceeds 60%.

This could occur if the floor is installed in newly built premises with inadequate or no ventilation, e.g. during holiday periods.

Before fitting the floor on Water UFH System

the surface temperature should be reduced to 15-18 degrees Celsius and then the fitting can start. After the completion of fitting the heating system should go back on in a controlled way, the temperature should be increased only few degrees Celsius per day over 7 days.

Please take note if the wood flooring is not acclimatized in the above way and you install the floor on a cold surface and then increase the temperature, the heat can cause "shock" to the wood flooring and could cause lifting, bowing or the top layer of the engineered boards can be delaminating.

IMPORTANT NOTE

Site conditions are extremely important and make all the difference to a timber floor. Site check before starting installation ensure moisture conditions required met is vital. Wood flooring will perform best when the domestic relative humidity range between 40%-65% and a temperature range of 18-24 degrees. Wood is a moisture absorbent material and its moisture level varies with air humidity and temperature. The subfloor moisture should not exceed 1.8%. Also for glue down and floating installation (non-underfloor heating) please make sure that you leave a gap of 10mm-15mm to any solid surface (wales, concert, and other) and if you have underfloor heating you should leave a gap of 15mm-20mm.

FOR EXAMPLE

- A. 50% air humidity and 20°C temperature average Oak floor will have 9% moisture content.
- B. 30% humidity and 25°C temperature the same Oak floor will have 5% moisture content. As air humidity changes so does the dimension of the wood.

The overall fabric (walls & floors) of a building should be thoroughly dry (so there are no visible signs of moisture or condensation when heating is on) before bringing in any timber.