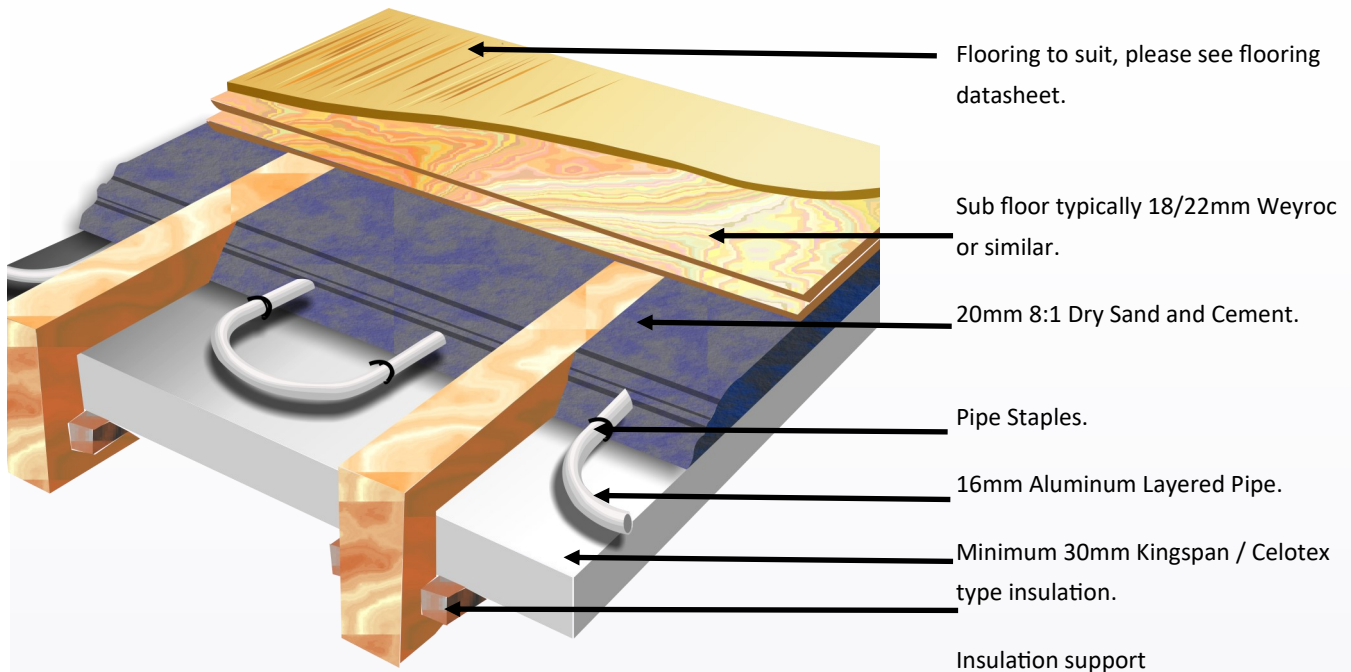


UNDERFLOOR HEATING FLOOR CONSTRUCTIONS DRY MIX BETWEEN JOIST

DESIGN | SUPPLY | INSTALL | SUPPORT | TRAIN

Dry Mix Between Joist System:



Overview

A traditional underfloor heating floor construction used in suspended floors in domestic properties.

High outputs for any given flow temperature, making it an ideal compliment to renewable and traditional heat sources. Due to maximum floor temperature limits, it is possible to have outputs of up to $100\text{W}/\text{m}^2$ this is dependent on pipe concentration, floor covering and flow temperatures.

Does not effect the floor build up, so no changes to build.

Insulation

Insulation levels must meet or exceed the requirements of part L of the building regulations, typically 30mm for intermediate floors and 100mm for ground floors. Additional insulation such as rockwool can be used to increase acoustic insulation. In addition to the insulation below the screed, perimeter insulation is also required which reduces the losses to the walls.

Screed

An 8:1 mix of dry sand and cement is used as the thermal layer and helps transfer the heat from the pipe to the underside of the floor. No water should be added, as the screed is not providing a supporting function. Typically the whole floor heating system weighs $28\text{kg}/\text{m}^2$.

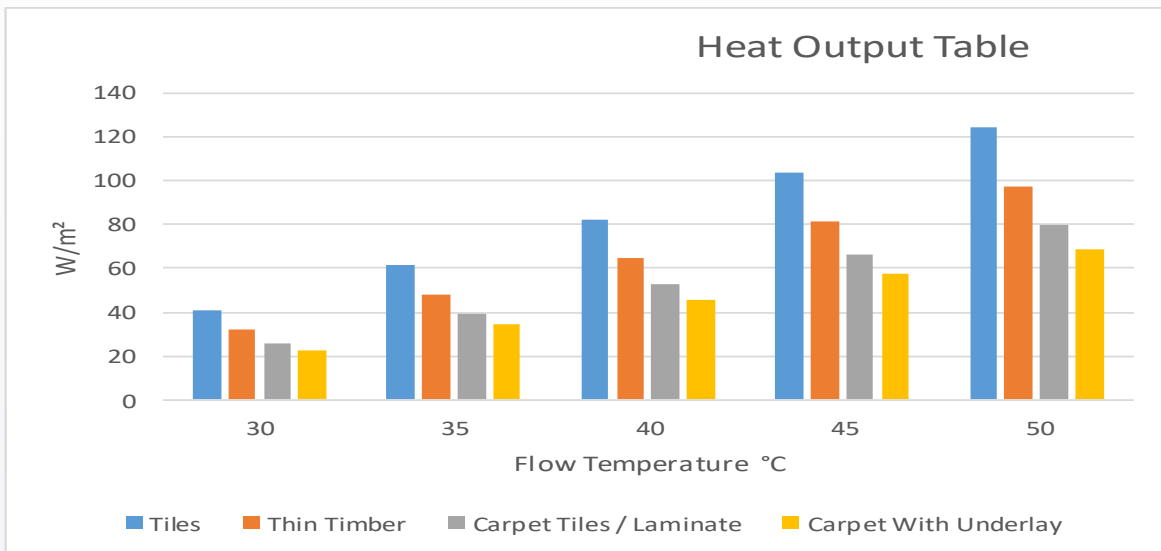
Floor Coverings

Most floor coverings can be used, please see our floor covering data sheet for more information.

Options

To suit different heat sources or heat losses, it is possible to change the distance between the pipes. Fitting the pipes closer together allows for greater outputs for a given flow temperature, or a reduction in flow temperature for a given output.

This is important for heat sources where the efficiency is effected by flow temperature such as heat pumps or overcoming areas with high heat loads such as older buildings or conservatories.



Heat outputs are shown for pipes laid at 200mm centers, with an air temperature of 20°C, more concentrated pipe would increase these figures and less concentrated pipe would have the effect of lowering them.

Options

Our preference is for a 16mm pipe which contains a layer of Aluminum, the advantage of which is the pipe stays in the shape which the installer forms. An alternative is to use a 15mm pipe without the Aluminum layer which some installers prefer.

An alternative to the simple staple is the use of a clip tracking system, where a preformed channel is fixed to the floor prior to the pipe being laid.

Control Options:

We offer a full range of controls, from a simple Night Set Back (NSB) dial thermostat to full Wi-Fi controlled systems. These include:

Rotary Dial NSB

The simple Rotary Dial NSB thermostat offers simple performance, allowing the use of Night Set Back, which itself offers increase efficiency and comfort than an on / off system. A centralized timer is used to provide user selectable timing from one convenient location.

Digital NSB

Offering the same functionality but in a digital form is the Digital NSB thermostat, as well as user preference, the temperature during set back periods is selectable.

Programmable Digital

The programmable digital thermostat enables the end user to set unique time and temperature profiles on a room by room basis. Especially suited where rooms of differing uses are located on the same floor, such as bungalows or homes containing an office

Programmable Digital With Wi-Fi

Similar in operation to the programmable thermostat, the Wi-Fi thermostats have the ability to be adjusted from a centralized location either in or away from the property, via a simple phone app. These systems are especially suited to holiday homes, bed and breakfasts or hotels, where it might be desirable to adjust the heating from elsewhere.

Wiring Centers

Our wiring centers are favored by our installers, these are available in 4 and 8 way units, providing ease of fitment.



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