

Installing Foil-tec

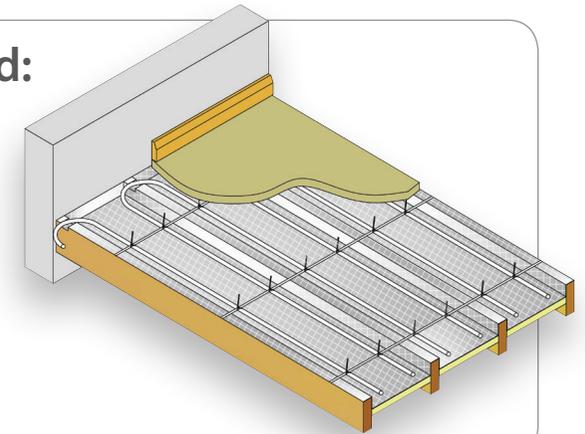
Foiltec is designed for use in any width suspended joist or battened floors using Foiltec Aluminium Foil with pipes set at 200mm or 135mm centres transmitting heat evenly across the chosen floor finish. The aluminium foil is fully certified and designed for floor heating purposes.

The heat produced is contained in the void below the floor finish which naturally rises and permeates through the floor providing comfortable heat controlled by the room thermostat. You will need to set the floor heating to come on and go off earlier than radiators due to the nature of floor heating.

Before working on open floors always follow health and safety guidelines and wear protective clothing where necessary.

You will need:

- Hammer
- Saw
- Nails
- Staple Gun
- Scissors
- Stanley knife
- Safety Glasses/Gloves
- Wire Cutters
- Tape Measure



1

Step by Step instructions

1 Notch joists according to building regulations if permissible (**1a**) or secure battens to the top of joist (**1b**) to allow pipe to pass between the joists allowing for bends and returns as per pipe layout (adjustment to pipe layout is acceptable on site). If attaching battens use 18mm minimum depth to allow for pipe and ensure all fixings are hammered flush.



2 Ensure adequate insulation is fitted between joists leaving a 50mm gap between the top of the insulation and the top of the joist/batten (**2a**). We advise a 50mm solid board insulation or 150mm mineral wool. Electrical wiring and other services contained in the floor construction should pass under the insulation other water pipes should be lagged.



3 Roll the Folitec out (shiny side up) **(3a/b)** ensuring foil is upstanding around edges of room by 75mm, form by hand **(3c)** and trim where necessary **(3d)** ensuring no gaps are visible that would allow heat to escape. Foil should be laid across the joists/battens and down 50mm between each joist to meet insulation and back up and over the next joist. Staple into place along the top and sides of the joists **(3e/f)**. Repeat this across the remaining joists. Cut to length with scissors when finished **(3g)**.

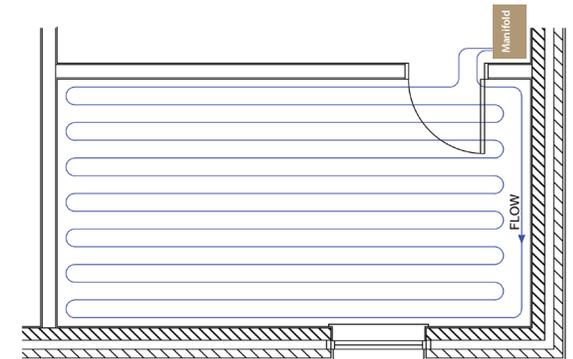


4 Lay the next run of Foiltec. Overlap all seams by 100mm **(4a)** do not tape joints. Staple into place **(4b/c)**. Repeat across the entire floor space **(4d)**.



5 All pipe runs start and finish at the manifold, by fitting the manifold in place before laying the floor heating pipe this will give a reference point for the start and end points for laying pipe runs. Allow sufficient pipe for cutting and connection to manifold at a later stage.

6 Before laying floor heating pipe study the pipe layout drawing if supplied. The system output relies more on the amount of pipe in the floor than the exact layout. The flow should always go to potential cold spots first for example outside walls or windows. Pipe should be set back 100mm from walls.



7 Pipe is best laid using two people (**7a**), one to roll out the pipe whilst the other lays the pipe into the Foiltec trough between joists measuring pipe centres (**7b**) and roughly translating the pipe layout into the floor. Don't worry if the pipe does not run perfectly straight it won't affect the system performance (**7c**). Be careful not to kink the pipe it is better to produce a 'light bulb' bend (**7d**) than try and force the pipe causing a kink, this will not affect system performance. 15mm masonry nail pipe clips can be used to secure pipes in notch (**7g/h**). Pipe is marked every metre so you can keep an eye on when to head back to the manifold. Repeat for each trough.



8 Having followed the pipe layout (**8a**) (if supplied) you will reach the point of having to return the pipe to the manifold. Create your return bend (**8b**) and run the pipe back to the manifold using the notches/gap in batten (**8c/d/e**).



9 Identify flow, return and zone of each pipe in turn using a permanent marker **9a**



3

10 Attach strapping to the top of the joists using nails/staples at 50cm intervals (**10a/b/c**).



10a



10b

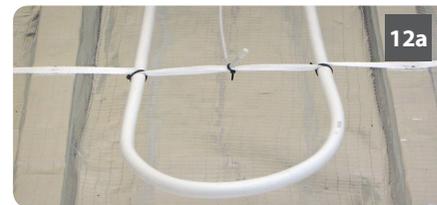


10c

Important Information

"When mixed floor solutions are being served from the same manifold, a floor probe must be used in the floor solution with the lower maximum supply temperature. This is to limit the temperature in these floor areas and prevent damage to the floor solution and/or floor finish."

12 Floor probes can be fitted if required to measure the temperature of the floor (**12a/b**)



12a



12b

13 Many flooring manufacturers i.e. solid wood/engineered board recommend the use of a damp proof membrane (DPM) if laying directly onto the joists (**13a**). Please consult your flooring supplier.



13a

Please note:

The addition of carpet and rugs on wooden floors can increase the temperature between floor and carpet. Total thickness of floorboards and any wooden or laminate floor finish should not exceed 25mm.

If intending to use carpets, make sure the combined tog value of carpet & underlay does not exceed 2.5 tog.

4

11 Cable tie pipe to strapping (**11a**) using tape measure to ensure they are spaced at the required centres (**11b**). Pull up tight and even out pipe runs (**11c**). Snip off end of cable ties (**11d**).



11a



11b



11c



11d

Technical Information

| | |
|------------------------------|----------------------------|
| Maximum heat output | Approx 80 W/m ² |
| Recommended flow temperature | 60/65°C* |
| Maximum loop length | 100m (16mm MLC Pipe) |
| Pipe centres | 135-200mm |
| Fire properties | Foil face meets Class 1 |
| Thermal resistance | 1.327 m ² K/W |
| Environmental | CFC & HCFC Free |
| Dimensions: | |
| Thickness | Less than 0.5mm |
| Width | 1 metre |
| Length | 50 metres |

*Limiting floor surface temperature to a maximum of 27°C, by using floor probes, is essential when using wooden floor finishes. Specialist timber floor suppliers should be contacted to obtain expert advice on your chosen floor finish.