Boulder Technical: Underfloor Heating Installation

BT001

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1 Sub-Floor Preparation

Before laying any underfloor heating pipe you should ensure that the sub floor has been adequately prepared.

The sub floor should be a level surface, clean and free of debris (fig. 1). It is important that you insulate underneath your pipe work in order to maximise efficiency by driving the heat upwards, thus minimizing heat loss through the flooring.

When insulating with high density foam board you should lay the boards to fit your floor space, taping the seams (fig. 2). Perimeter strip insulation (fig. 3) should be used around the edge of your room to allow for expansion of the floor screed.

When insulating with a multifoil such as SuperFOIL SFUF (fig. 4) you should cover the floor space and tape the seams. As above, you can use perimeter strip insulation to allow for screed expansion. Alternatively lap the multifoil 100mm up the edge of the wall for the same effect.

fig. 1

Clean Floor

fig. 2

Insulation Boards

fig. 3

Perimeter Strip

fig. 4

SuperFOIL SFUF

Technical Information

Maximum loop length	100m (16mm Barrier Pipe)
Pipe Centres	100-200mm
Staples Per Meter of Pipe	2
Maximum Flow Temperature	45 degrees Celcius

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2 Fixing the Pipe

First of all you need a plan for the layout of your pipe. There are multiple ways of designing an underfloor heating pipe layout, but where possible we generally recommend using a "spiral" configuration (fig. 5) as it's easier and more efficient. Layouts can also be in lengths with returns at the end. All configurations should be laid in such a manner that 5m of pipe is used per square metre (200mm centres) in a well insulated house, using up to double that in a poorly insulated house (100mm centres).

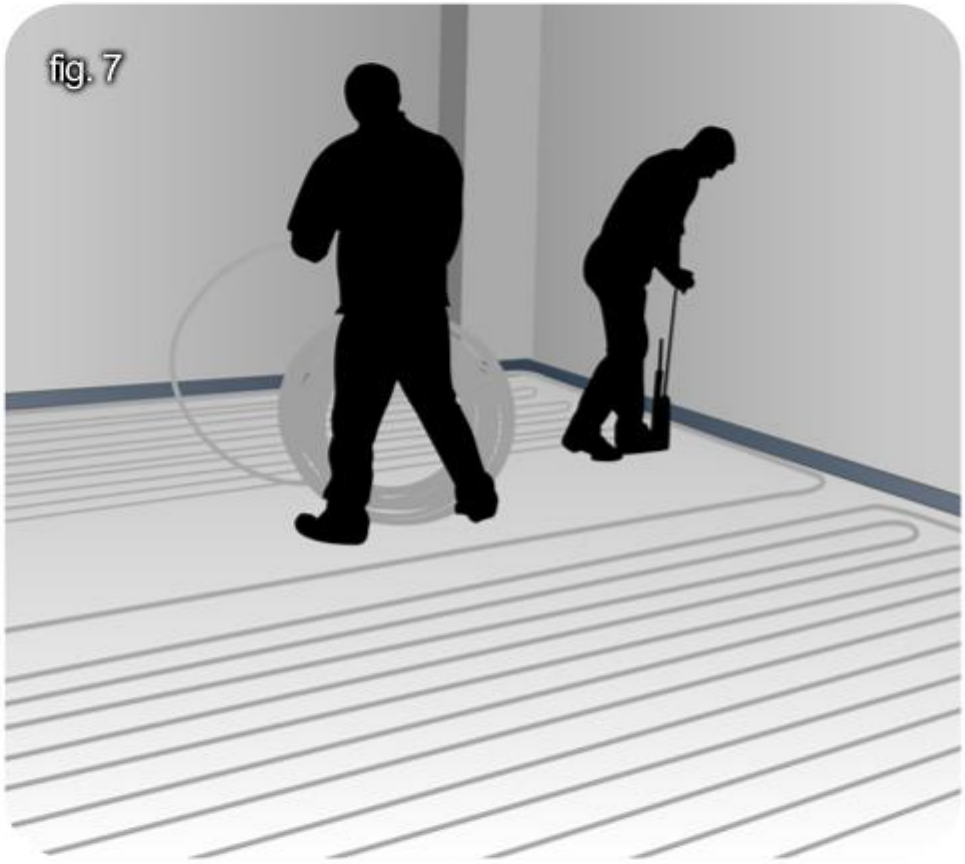
fig. 5

fig. 6

Laying the pipe in a spiral configuration is performed most efficiently with two people. Starting from the manifold, work along the perimeter of the room, making your way inwards walking to the pipe plan. On the way inwards the pipe should be laid with a double spacing, making sure to use more pipe near patio windows by decreasing the spacing. Once you reach the middle, loop round and work your way back through the gaps to the manifold.

Whilst the first person is laying the pipe, the second should follow stapling it in place, using at least 2 staples per meter of pipe (fig. 7).

fig. 7



All of our systems use high quality Pex-Al-Pe barrier pipe which has an aluminium core (fig. 6). It is easy to bend, durable and retains it's shape very well, which makes it extremely effective for any underfloor heating applications whether big or small.

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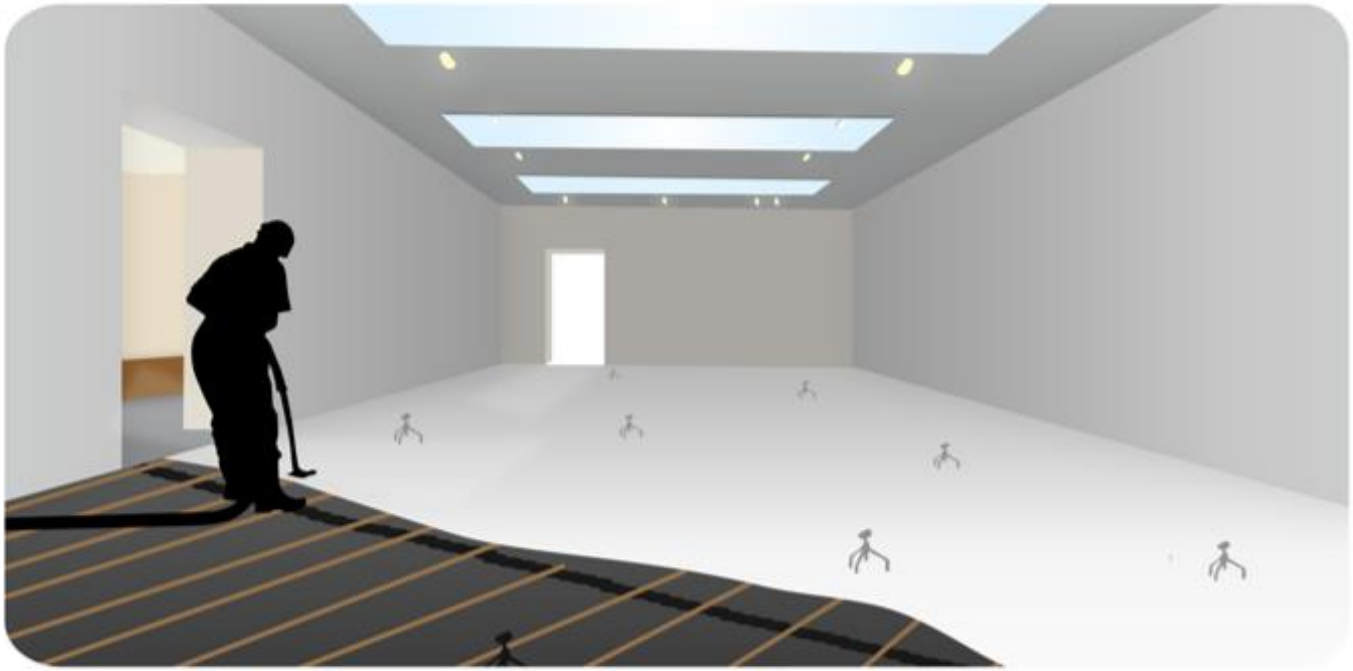
3 Screeding

When using a traditional concrete screed in a domestic or light commercial application, a minimum thickness of 65mm should be used. If you are using a specialist screed the minimum depth will differ depending on construction requirements.

Once your screed has been laid it should be given ample time for drying before switching on your underfloor heating system. Unless the concrete has fully dried, turning your system on could affect floor integrity.

Once you are confident that your screed has fully dried you should gradually increase the heat from your system over the period of a week until you reach your desired room temperature (to a maximum of 45 degrees Celcius).



Boulder Technical: Pump Blender Information

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