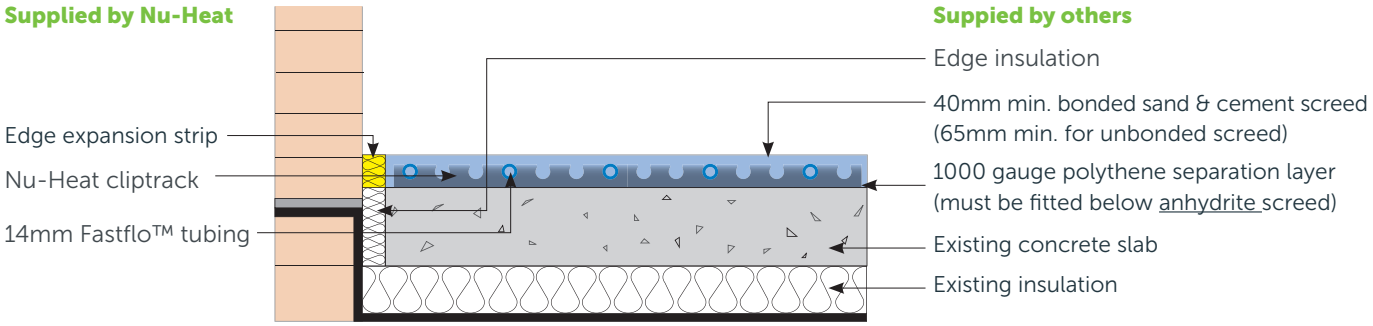
UNDERFLOOR HEATING

Nu-Heat UNDERFLOOR & RENEWABLES

Floor installation instructions

SCS14 – 14mm Fastflo™ in screed with Cliptrack for installation directly over an existing slab



TECHNICAL INFORMATION

Control

If used with a conventional boiler then it is essential that a setback thermostat feature is employed.

Insulation

Ground floors: The insulation beneath the floor slab should be 70mm 'Celotex' or equivalent, or it must conform to Part L of the Building Regulations, whichever is the greater.

Edge insulation/expansion strip: This should be placed around the perimeter of the room against all walls to act as an expansion medium. This should be the same thickness as the edge insulation between the slab and the wall and should be compressible.

Expansion joints

Expansion joints must be incorporated in areas over 40m², or with length greater than 8m and across doorways and other changes of section. Where tube passes across expansion joints it must be covered with sleeving for at least 200mm either side.

Floor structure

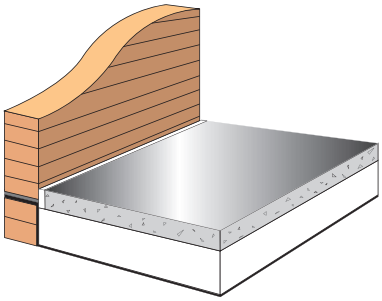
Bonded screed: 40mm deep bonded sand and cement screed should be used at the ratio of 4 parts sand to 1 part cement to comply with BS 8204-1:2003.

A cement slurry bonding with a proprietary admixture (e.g Dunlop Universal Bonding Agent) should be used to bond the screed to the slab. Care should be taken to ensure good contact between the underfloor heating tube and the screed. It is important that the screed is as dense and consistent as possible to aid heat transfer.

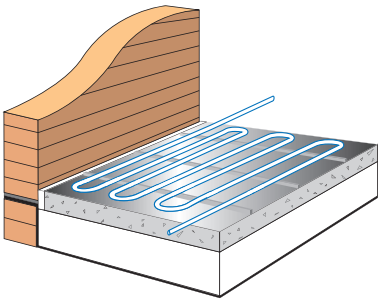
Unbonded screed: Standard 65mm deep sand and cement screed should be used in the ratio 4 parts sand to one part cement. A consistent, dense screed will aid heat transfer.

Anhydrite screed: Always install a 100 gauge polythene separation layer between the top of the concrete slab and the gypsum screed; all joints should be taped.

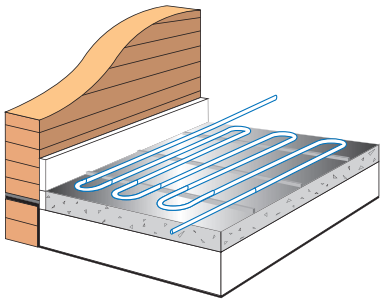
SEQUENCE OF LAYING THE FLOOR



1 The existing floor slab should be prepared as per BS 8204-1:2003, section 7.4.2 *Roughening of the base*.

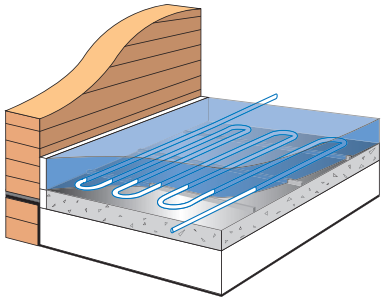


2 Lay the ClipTrack and 14mm Fastflo tube as described on the following page.



3 Place the edge expansion strip against all walls to act as an expansion medium, as well as preventing unwanted heat dissipation.

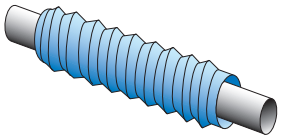
4 The slab should be wetted over night before laying the screed. The excess water should be removed.



5 The screeding procedure should be completed with the system at 1 bar pressure.

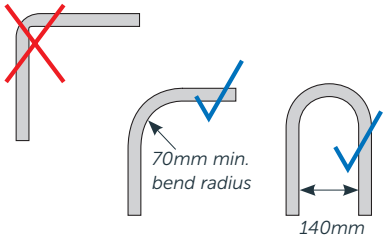
6 A cement grout with proprietary admixture (e.g. Dunlop Universal Bonding Agent) should be laid over the floor.

7 The screed must then be laid and compacted whilst the grout is still wet.



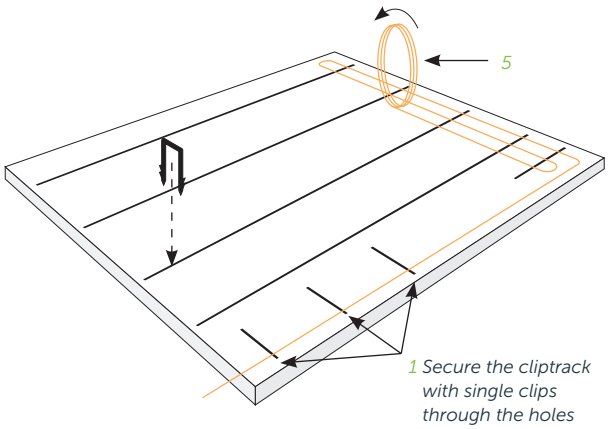
Notes:

On floor areas over 40m² a protective sleeve should be used to cover tubing where it crosses expansion joints. Please contact Nu-Heat for supply.

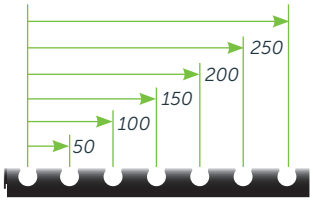


Never kink the Fastflo™ tube as this will damage the tube and restrict water flow.

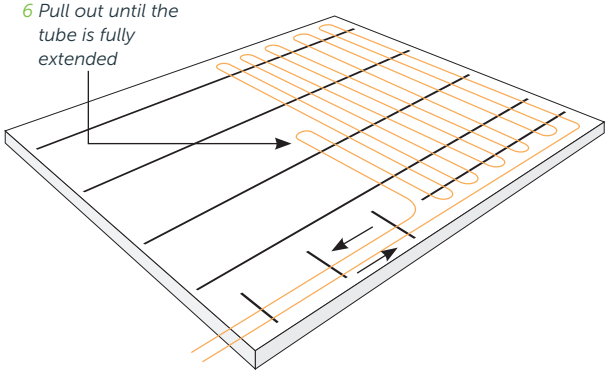
SEQUENCE OF LAYING THE HEATING TUBE IN THE FLOOR



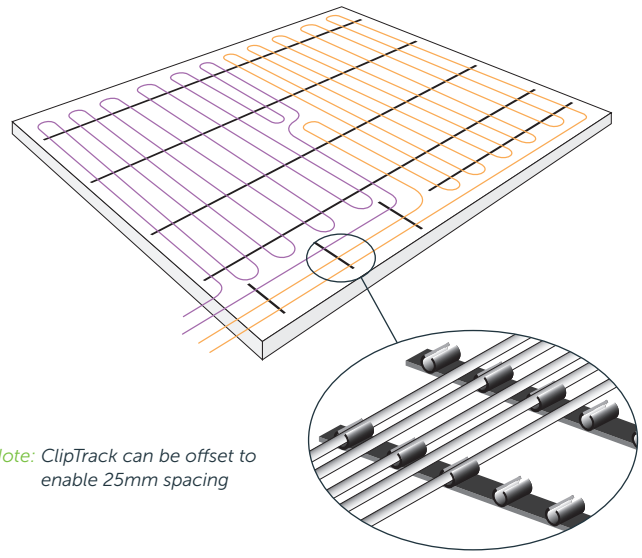
1 Secure the cliptrack with single clips through the holes



5 Tube spacing



6 Pull out until the tube is fully extended



Note: ClipTrack can be offset to enable 25mm spacing

1. Fix the first few lengths of cliptrack at approximately 1m intervals. There are several ways to fix the cliptrack:
   i) A 'Paslode' nail gun can be used to nail through the plastic web of the ClipTrack;
   ii) An instant grab adhesive such as 'No more nails' can be used (remove the clip's own adhesive strip first);
   iii) The concrete slab can be drilled, plugged and the ClipTrack screwed in position.
2. Check the number and length of floor tubing coils needed for the room on the system plans. Each coil is marked every metre with its overall length and remaining coil length ending at 0m.

Note: **All tube coils within a single zone must be no more than 10% different in length.**

3. Connect one end of the tube to the correct port on the manifold as described in the *Installation Manual* and **label it clearly**.
4. Lay the tube from the manifold to the zone on the quickest, most direct route.
5. On reaching the zone, start unrolling the tube pushing it into the cliptrack as you go. Follow the layout shown on the system plans making sure to use the correct spacing as detailed. Place more cliptrack as needed at 1m intervals.
6. Carry on until you judge there is enough tube left to return to the correct manifold **plus any difference in supplied length and cut-length**. The markings on the tube can be used to help. Do not trim this excess or connect to the manifold at this stage.
7. If there are more coils indicated for this zone, they can now be laid in exactly the same way.
8. Now simply continue working across the floor and back to the manifold making sure the floor is fully and evenly covered with tube.
9. When the correct number and lengths of tube are laid in the floor, trim excess coil length and connect to the manifold as described in the *Installation Manual*.
10. Pressure test the system as described in the *Installation Manual*.