

Builder Work Required in Preparation for Under-floor Heating in a Concrete Screed Floor:

1. Builder to set concrete structural floor 150mm below finished floor level.
2. Builder to install floor insulation (min 80mm thick) high density polyutherane.
3. **Paragon** to Install Pipe Fixing Rails (only suitable w/ Floormate Insulation or similar)*
4. **Paragon** to Install Under Floor Heating Pipes as Design Layout
5. **Paragon** to Fill & Pressurise System with Suitable Inhibitor
6. Builder to screed floor 75mm thick, being careful not to damage the floor heating pipes.
7. Any damage to be reported to Paragon or the Site Agent.

* If using polystyrene insulation then the pipes have to be fixed to A142 6mm steel mesh.

Builder Work Required in Preparation for Underfloor Heating in a Concrete Slab Floor:

1. Builder to form foundation to Ground Floor Level.
2. Up-fill with suitable Hard Core to 250mm below Ground Floor level.
3. Level found. with 50mm sand binding.
4. Fit Visqueen or suitable DPM.
5. Fit Minimum 80mm High Density Insulation.
6. Fit perimeter insulation.
7. Lay reinforcement steel mesh A142 6mm. Ensure full sheets are laid where possible, avoid using cuttings and ensure mesh is not bent or buckled, overlap mesh by 1 square and keep mesh in-line.
8. After Under-floor Heating Pipes are secured to Reinforcement Mesh, Mesh to be lifted by the Builder & rested on spacer stools so that the top of the heating pipes are within 35-40mm of the finished concrete floor surface.
9. **Paragon** to fill and pressurise system with recommended anti-freeze inhibitor to 3-bar.
10. Builder to pour 125mm Concrete screed and level.

Builder-Joiner Work Required in Preparation for Under-floor Heating in a Timber Floor:

1. Joiners to fit rigid insulation board.
2. Joiners to lay 12mm Sterling Board throughout on top of existing Joists.
3. Joiners to dwang between joists to carry sheet ends
4. Joiners to lay 25mm x 45mm battens in the line of the joists and around the Inside Perimeter of the building and each room..
5. **Paragon** to lay and fix the under-floor heating pipes between the battens as per the heating design.
6. Builder to spread mix of sand/cement 8:1 flush to the top of the battens covering the heating pipes.
7. Builder to steel float the sand/cement level and leave to harden before laying the floor**
8. Joiners to lay chipboard flooring as normal.
9. **Paragon** to fill and pressurise system with recommended anti-freeze inhibitor.

Note 1: It is our advice that any timber partitioning that requires to be fixed to the concrete floor or timber floor should be done with a suitable adhesive to ensure no damage to the heating pipes by nails. These adhesives are widely available on the market now and are proven to be stronger than nailing.

Note 2: When laying the OSB Board, leave a 3mm gap at the joints as the board is prone to expansion and can cause creaking. Also, when fixing the 25x 45 battens it is advisable to glue the battens to the OSB Board and then nail or screw the battens. Each room should be laid with a perimeter batten and the battens on top of the joists should be stopped 120mm short of perimeter batten.

Note 3. The rigid insulation panel must be fitted tight underneath the sterling board.

Note 4. It is imperative that the sand/cement mix has hardened and is **completely dry** before the finished floor is laid. If in doubt, lay a DPM sheet over the sand/cement before laying the floor as residual moisture can cause movement in the floor. **

NOTE: Insulating is as important as under floor heating and insulation installed incorrectly will result in Under floor heating not working to its optimum efficiency!

ELECTRICAL

(This is the general electrical requirement guideline but certain boiler-heating packages may vary from this).

1. All Electrical Work to be carried out to IEE Rules & Regulations and to Local Authority Requirements.
2. Single Wall Box should be placed where the Thermostats are to be installed.
3. Cables from the Thermostats to the Manifold should be 1.0mm, 2-Core & Earth.
4. All Thermostat Cables to be clearly marked with their appropriate Designation.
5. A 1.0mm, 3-Core & Earth Cable should run from the Manifold to the Boiler and each Manifold should be linked with a 1.00mm, 3-core and earth cable.
6. A 240V Supply switched 5-amp fused spur at the Boiler.
7. A 2-Core & Earth to be run from Clock Stat position to the Manifold and linked to other manifolds if fitted.
8. Location of Thermostats should be approximately 1.5m from the floor, out of direct sunlight and any draught source.
8. Thermostats positioning as per autocad but this should be confirmed with the customer.
9. Wiring Diagrams/Booklet provided with each installation for plumber/electrician to read/follow.

*** Please refer to wiring diagram booklet provided with each installation.**

***Note:** Paragon offer optional cost for wiring of under floor heating controls and/or test and commission of system when boiler installed either by Paragon or others.*

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