

UNDERFLOOR HEATING

- **A Good Decision in its Own Right.**

Underfloor heating provides a gentle and luxurious heat. It radiates upwards from the floor; moving the heat through the air and heating you and your surroundings progressively and positively. By using radiation it avoids the cold currents of air created by Radiators which, in spite of their name, actually spread the heat by convection, a process that involves moving the air itself. Underfloor heating is constant throughout the room and adds to your superior level of personal comfort by avoiding the hot and cold spots that are inevitable with radiators. In fact, underfloor heating is like having sunshine in the room all of the time.



- **You Get to Use all of Your Floor and Wall Space**

You can be free to design your interior any way you want. Every inch of your floor and wall space is available to you for positioning of furniture, plants, or art. Any type of floor covering may be used with under floor heating – stone, tiles, even wooden floors. And your visual internal landscape is uncluttered by what is essentially machinery. Now there are no unsightly radiators and the only visible part of your heating system will be a discrete thermostat.

- **It can Improve your Health, Safety, and Quality of Life**

The gentle, radiated, warmth from our underfloor heating does not dehumidify the air in your living or sleeping space, so there are no dry throats for all, and no breathing difficulties for those with respiratory disorders. Our underfloor heating does not generate air currents, so there are no draughts, no hot and cold spots, and no dust funnels (ever noticed the black streaks on the walls above radiators?). This is more good news for asthma sufferers and others with respiratory sensitivities. All heating equipment is hidden underneath the floor and is not only safe from all touch related accidents, but its low temperatures make burns impossible.

- **And it can Save You Money at the Same Time**

Underfloor heating reduces the energy consumption required for space heating by using low water temperatures to heat the space from the bottom up. Your boiler can run at a lower cost, and that part of your room that you occupy is heated first. In contrast the heat from radiators must convect to the ceiling before moving out and down to heat those areas of the room, which are remote from the radiator. How high is your ceiling and how much time do you spend up there?

But most importantly, underfloor heating can be used to its maximum effect when combined with a Heat Pump. Together the two technologies produce the most cost efficient space heating system in Northern Europe and can result in savings of up to 80% when compared with fossil fuel based systems. Small wonder then, that underfloor heating systems now account for over 60% of some European heating markets.

- **Why buy your Underfloor Heating from Pure Energy Technology Limited.**

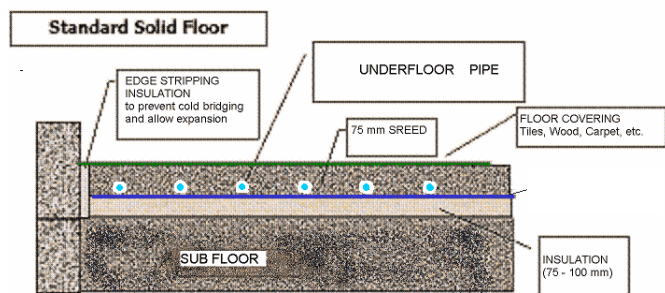
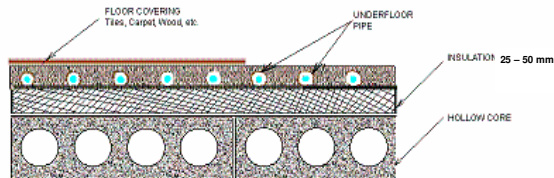
- We provide a complete turnkey service, including design, supply, installation, and commissioning.
- Our fully qualified persons go on-site and lay the underfloor heating system.
- Our underfloor heating layout design uses the optimum pipe diameter and spacing to provide the heat level appropriate to your specific room characteristics, (such as ceiling height, number of windows, number of external walls, etc.) while keeping your running costs to a minimum.
- We will provide all the necessary diagrams and instructions directly to your Sub Contractors, (Builder, Plumber, Electricians) in order to successfully connect up your Underfloor heating system.
- We use our experience, and our dedication to 100% customer satisfaction, to deliver a system for you that will last a lifetime and exceed all your expectations.

SOME TYPICAL INSTALATION EXAMPLES

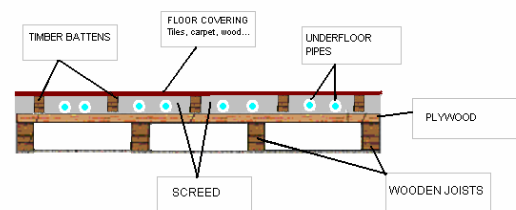
We recommend that a minimum insulation of 70mm High Density Kingspan, or equivalent, should be laid under the heating pipe layer on the ground floor. On upstairs hollow core floors the minimum can be 25mm, and no insulation is required on plywood covered wooden joist floors. The underfloor heating pipe is held in place by tracking strips laid on top of the insulation by our installers. The finished concrete floor is poured and encases the heating pipes. We recommend no more that 75mm of standard screed is used on the ground floor, and 50mm is common upstairs. The insulation and poured concrete is supplied and installed by your builder. **Don't forget to check your upstairs loadings with your engineering advisor.**



INTERMEDIATE FLOOR
HOLLOW CORE PRE-CAST UNITS



TIMBER JOIST FLOOR



Programmable Thermostats.

Our underfloor loop design is laid out so as to facilitate the sub-division of your building into temperature control zones. Control can be provided through basic heat sensor switches which you can source in many outlets. Alternatively we can supply digital, programmable, thermostats which will enable you to exercise precise control of the temperature in each zone exactly as you see fit to do so. Specifically, each thermostat allows up to six time periods and temperature levels to be set-up for weekdays in each zone individually. Four different time periods and temperatures can be set for each zone for Saturdays, and four others for Sundays. Programme once and forget it, even power outages are catered for by the battery back-up. For exceptions there is an up/down override button to immediately alter the programmed temperature, with later automatic resumption of the pre-set program

Aluminium Oxygen Barrier underfloor pipe.

Our underfloor heating pipe is five layers Premier Pex Al Pex of the highest grade. It is an aluminium barrier pipe that gives a 100% oxygen barrier and is the highest-grade oxygen barrier pipe available. Inferior grade underfloor pipe can allow oxygen to penetrate to the system and over time may cause corrosion of the heating system elements. Our pipe is rated for operation up to 95°C and a pressure of 10 Bar. It meets strict UK, German, and US standards and certification levels and is guaranteed for 25 years.

Logic Unit.

The logic strip that we provide enables the electrician to easily link the zone control thermostats to the underfloor heating loops in the target zone. We provide full detailed drawings for the electrician at the appropriate time.