

TOMORROWS HEATING > TODAY



HEATMASTER
from **William Wilson**



UNDERFLOOR HEATING

Underfloor Heating > What is it?

In its simplest terms Underfloor Heating (UFH) means your floor area becomes one large (very low temperature) radiator where continuous coils of plastic pipe are buried in the floor screed or, alternatively, run below a timber floor system. The temperature of the water in these plastic pipes is automatically controlled to ensure a floor surface temperature of 25 - 29°C – not much warmer than the temperature of your hand!

Installation is slightly more than a conventional radiator system, but fuel costs are lower, the 'heating effect' is better and there are obvious health and safety benefits.

Little wonder that today UFH is regarded as the closest you can get to the ultimate heating system.

UFH can be operated from gas, oil or even solid fuel boilers, and is particularly suitable for use with the latest high efficiency condensing boilers. It particularly lends itself to new construction when the entire system can be 'underfloor' or, alternatively, combined with a radiator system in e.g. bedrooms. Increasingly UFH is being successfully installed in new conservatories and extensions even although the main house is still conventionally heated by radiators – both systems being compatible with each other.



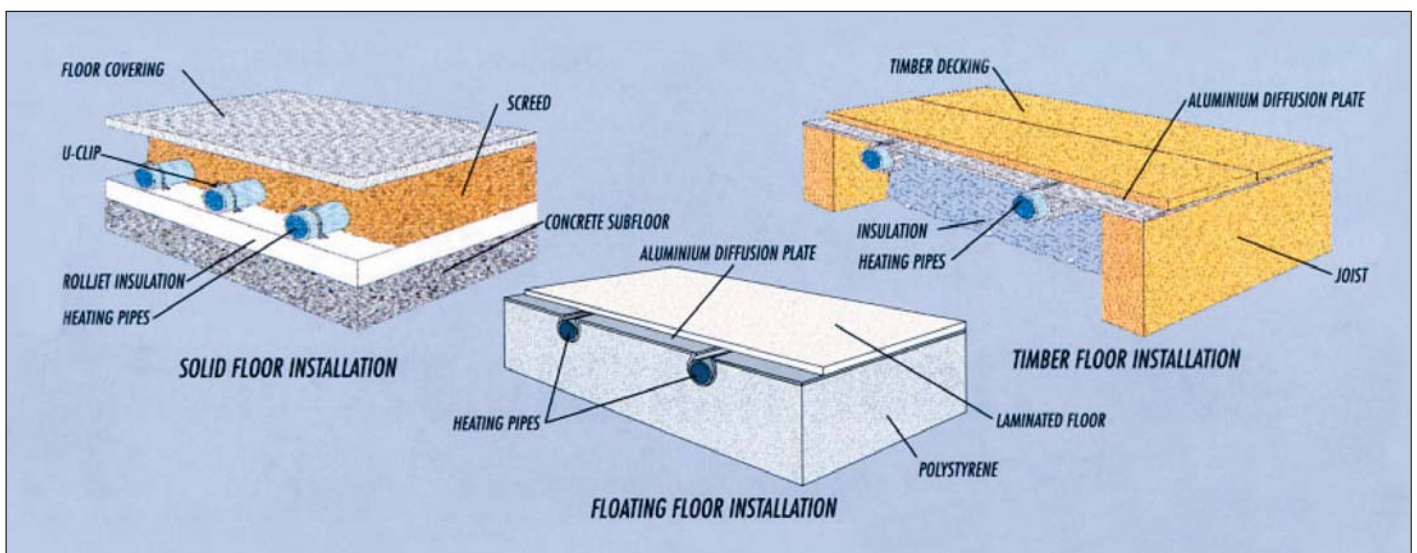
Must I always have a solid floor?

Not at all! You have a choice of floor construction and finishes. Typically UFH is associated with solid floors where the pipe coils are buried in the concrete screed. This is certainly a very efficient method but is not always everyone's choice. 'Heatmaster' UFH is also suitable for suspended timber floors or with Floating Floor Systems (see diagrams).

Similarly, you have choice in final floor finishes, albeit it should be noted that finishes with greater thermal resistance e.g. carpet, reduces the output from the underfloor heating.

Four basic floor finishes are usually considered:

- Ceramic tiles, also natural stone and manufactured stone materials such as flagstone, slate etc.
- Plastic or vinyl floor coverings
- Timber and timber products
- Carpet – although care must be taken that carpet and underlay combinations do not have a combined thermal resistance exceeding 0.15m² K/W (or a 1.5 tog rating).





Benefits of Heatmaster Underfloor Heating

Heatmaster UFH can be used in a wide variety of applications e.g. Domestic, Conservatory, Nursing Home, Sports Centre etc. all of which benefit from numerous advantages over basic radiator systems.

Lower fuel bills

Heatmaster UFH can save you up to 15% off your fuel bills, particularly when used with the latest condensing boiler. Even distribution of heat means the actual room air temperatures can be reduced by 1 - 2°C over an equivalent radiator system whilst still giving an improved feeling of comfort.

Health and safety

Even distribution of heat means no cold draughts at floor level, nor wasteful high temperatures at ceiling level (see diagram). Dust and air movement is minimised – a boon for sufferers of dust allergy and with humidity also being reduced this greatly helps to eradicate the actual dust mites. There are no scalding hot radiator surfaces or sharp metal edges for children or the elderly to fall against. Ultra hygienic with total access for cleaning i.e. no dust traps behind radiators to contend with!

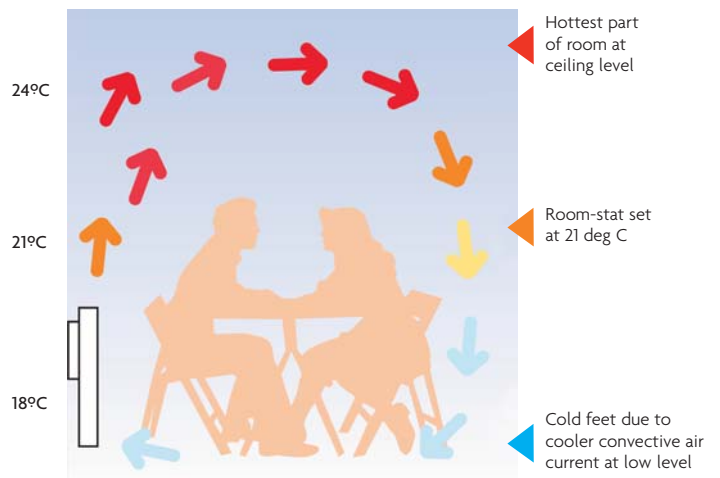
Freedom for interior design

With UFH as the main source of heating, radiators and their associated pipework become unnecessary. More pleasing to the eye and it gives complete freedom in interior design and furniture layout.

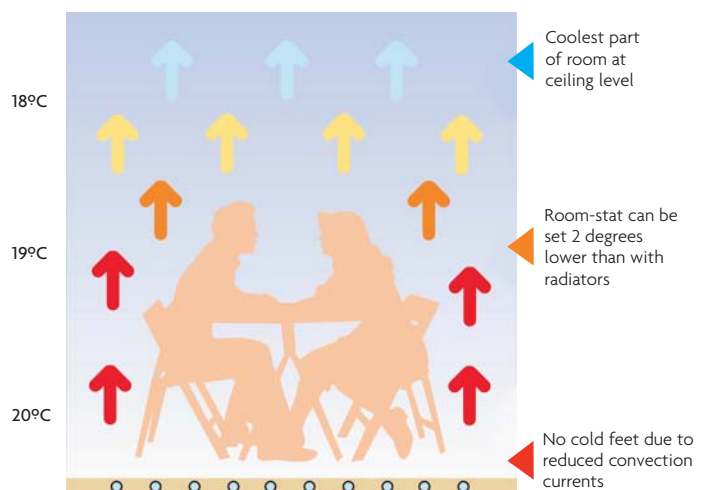
other benefits include >

- Low maintenance e.g. no painting of radiators
- Silent running
- Ideally suited for high ceilings e.g. churches
- Vandal proof

Heating by radiators (convection heat-flow pattern)



Underfloor Heating (radiation heat-flow pattern)



UNIFORM HEAT across the whole room minimising convection 'currents' which are unavoidable with radiator systems. Temperature gradient from floor to ceiling is very even thus avoiding 'cold feet' and 'hot stuffy heads'.

Technical details



Heatmaster Underfloor Heating Pipe VPE/PAM crosslinked polyethylene pipe is manufactured using the Pont a' Moussan (PAM) process, the performance of which exceeds DIN 16892/3. Supplied in 17mm and 20mm OD with a 2mm wall thickness, Heatmaster pipe has a rated working pressure of 6 bar at 90°C and conforms to DIN Standard 4726.

The Heatmaster oxygen diffusion barrier is impervious to oxygen with no measurable oxygen ingress at 50°C. It is the ideal barrier, having a strong bond between the barrier layer and the pipe, a low thermal resistance and the same thermal coefficient of expansion as the pipe.

Heatmaster Pipe carries a 10 year guarantee.

Temperature Control

All our underfloor systems incorporate quality temperature controls which give independent control of each heated area as dictated by the user.

For more detailed technical information on Heatmaster Underfloor Systems and associate controls see our supplementary technical sheet.

Why use Heatmaster from William Wilson / Northern Heating?

Manufactured to ISO 9001, Heatmaster UFH is a high quality tried and tested product with many systems now successfully installed in domestic and commercial applications across Scotland.

Contrary to popular belief, you don't have to go to 'specialist companies' to have UFH installed – your local SNIPEF plumber is almost certain to be more than capable of doing the work.

So what's your next step?

From your building plans William Wilson/Northern Heating Engineers can produce an energy efficient computerised design, generated to give maximum comfort, and through our 'Plan For Warmth' free advisory service we then invite on your behalf up to 3 competitive quotes for the complete installation – the final choice of contractor resting with you the user. However, our service doesn't stop there! – If you or your plumber require practical 'fitting advice' our Design Engineers will do everything they can to help - either by telephone or, if the site is within reasonable distance of a design office - a free site visit would be provided.

William Wilson

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