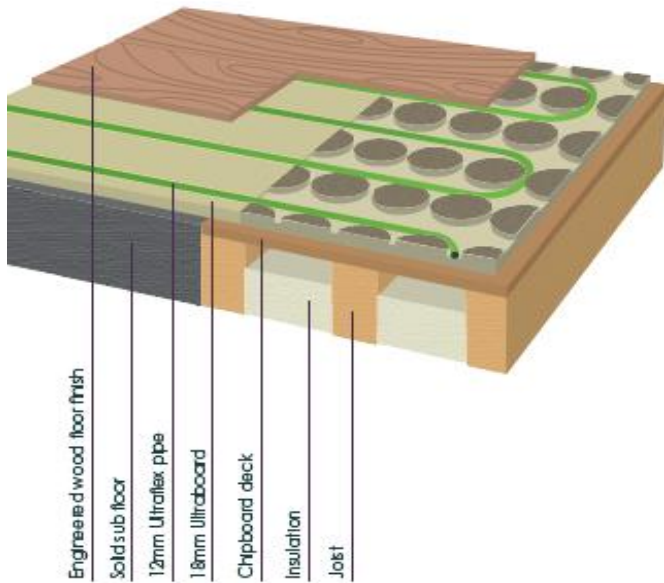


UltraBoard

Underfloor Heating for Renovations, Extensions & Conservatories



UltraBoard

Low-profile, UFH solution for renovations

Featuring a gypsum-based fibre board that can be installed over new or existing floor decks, either solid concrete or timber suspended. For properties that are being renovated or refurbished, underfloor heating can now be easily installed. At only 18mm thick, each board is pre routed to accept the highly flexible 12mm UltraFlex pipe.

At the manifold or where transition pipes are close together, such as through doorways, a castellated panel and self-levelling compound will be supplied.

Most floor coverings can be laid directly over the UltraBoard panels, except for vinyl*. Therefore, UltraBoard requires no screed or grouting over the top, which makes it straightforward and speedy to install, without the disruption of taking up existing floors.

*Requires 10mm plywood board or a 6-10mm layer of self-levelling compound.

The ultimate in UFH retrofit solutions

- ☑ Ideal for older buildings
- ☑ Solution for whole house renovations
- ☑ No need to dig out old concrete floors
- ☑ Overlay system for existing concrete or timber floors
- ☑ Great for new extensions and conservatories
- ☑ Good for installation from old rooms to new extensions
- ☑ Excellent for properties with high ceilings
- ☑ Provides a flat finish for floor coverings
- ☑ Adds only 18mm in depth to existing floor
- ☑ High thermal outputs
- ☑ Rapid heat up times compared to traditional screed
- ☑ Quick installation times
- ☑ Direct manifold connections
- ☑ Uses highly flexible 12mm Ultraflex pipe

Key Features

- **Overlay onto existing floor**
- **Adds only 18mm in height**
- **Provides flat floor surface**
- **High thermal output**
- **Rapid heat up times**
- **12mm UltraFlex pipe**
- **Direct manifold connections (no splitters into smaller pipes)**

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Insulation

UltraBoard has been specifically designed for existing buildings, renovations, extensions, and conservatories. Because of the floor build up being only 18mm, for existing solid concrete floors there is no need to excavate, unless the floor is not structurally sound.

Because of this there is no requirement for insulation to be added to an existing solid floor over a soil or clay ground. As the average soil temperature beneath a building is usually constant at 10°C, the downward losses are limited to 6-10%, and as the efficiency of UFH is 25% greater than radiators, it is still more cost effective than traditional heating.

In addition, as the 18mm UltraBoard is relatively thin there is not the mass associated with normal screeded systems, so this system heats up extremely fast. Unlike wooden overlay boards, the UltraBoard gypsum fibre boards have a higher thermal output and spreads the heat evenly from the Ultra flex 12mm pipe through the boards. The UltraBoard system, once it reaches temperature and has heated the room, will turn off, therefore limiting the downward losses.

However, if there is a ventilated void beneath the ground floor, such as timber suspended or a block and beam construction, then insulation would be required as the temperature in the void would be the same as the external air temperature. Mineral wool or PIR/PUR equivalent would be sufficient. No insulation is required on first or second floor applications, except what is required by the building regulations for sound transmission.

Note: The edge isolation strip supplied by Mi-Heat should be fitted around all the walls. This should be fitted to the full depth of the floor.

Floor Structure

The UltraBoard system consists of gypsum fibre boards, pre routed for 12mm pipe, and comes in straight runs, returns and circles for 90 bends. A castellated panel with self-levelling compound will also be supplied for awkward areas and return runs back to the manifold where required. Depending on the floor covering and the sub-base UltraBoard may also need to be screwed down. Where the existing floor requires castellated panels, the floor must be prepared and free from dust and sealed using the Mapei Eco Prim T floor sealant, which is supplied by Mi-Heat.

The 12mm UltraFlex pipe is laid within the panel, which is held tight with the pre routed board. The UltraFlex pipe is then connected to the manifold with one joint for the flow and one for the return and is not split. The specialist self-levelling compound is then laid over the castellated panels and pipe to a depth of 18mm.

Manifold

The Mi-Heat manifold is made from stainless steel with connections to 12mm UltraFlex pipe. Every loop has one connection for the flow and one for the return. It does not

split into smaller pipes, which means it is much easier and quicker to install and balance the system. This ensures a completely water-tight seal without the risk of leaking joints or coming adrift after installation. It also ensures that proper balancing of the system can be preserved.

Each manifold comes with a 3-bar pressure gauge, as well as two temperature gauges to ensure the 10°C temperature difference between the flow and return rails on the manifold.

Floor Coverings

Virtually any floor covering can be used, however the best is those that have little resistance to heat transference, such as stone, ceramic tiles, and laminate flooring solutions.

Engineered wood flooring is also an excellent choice, and because of its laminate construction, it is very stable.

Greater care should be taken when using solid wood flooring, which should have a low moisture content of 10% or less. Before installation natural wood needs to be acclimatised to the climactic conditions in the property. For any wood flooring, a floor sensor should be installed, to protect the floor from overheating and keeping the surface temperature to maximum of 27°C. Floor sensors are supplied where required once the floor coverings are known and is supplied by Mi-Heat.

Vinyl is also another popular choice, as well as resin floors, and again a floor sensor will be required to keep the floor temperature to a maximum of 27°C.

Carpets can be used but the Tog value, when combined with an underlay should be no greater than 2.5 togs. A specialist feather grout will be supplied to cover the pipes and the routed sections to provide a completely smooth surface.

If the system is powered by a heat pump rather than a traditional gas or oil-fired boiler, greater restrictions apply as the flow temperature is much lower, usually 45°C rather than 55°C.

Mi-Heat Warranties and Insurance

Manufacturer's warranty: All Ultraflex pipe supplied by Mi-Heat is covered by a 50-year warranty, the first 10 years are insurance-backed.

Product liability: Mi-Heat maintains product liability insurance to £5 million.

Professional indemnity: Mi-Heat designs are an integral part of the operational effectiveness of the UFH system, therefore Mi-Heat holds professional indemnity insurance of £5 million to cover all aspects of our design services.