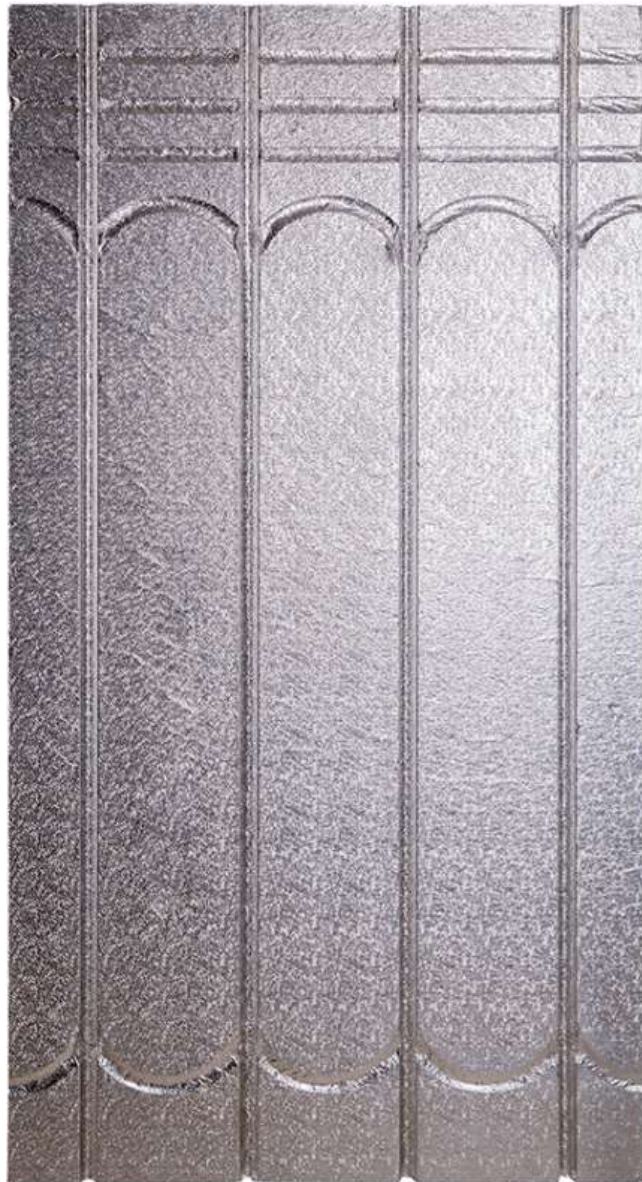


HETTA EPS 400 (FOILED & NON-FOILED) – INSTALLATION MANUAL



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Overview

The Hetta floating floor system has been uniquely developed to meet an increasing demand from clients requiring underfloor heating as a retro fit solution to existing floor areas.

The extruded polystyrene panels are foil coated and have a low thermal mass and consequently have a swift response time to changes in temperature.

The grooves in the insulation securely retain the underfloor heating pipework in the correct position eliminating the need for supplementary fixings.

- No need for screed, only raises the floor by 20mm, no waiting for screed to dry, greatly reduced fitting costs
- Pipe spacing at 150mm for a greater heat output
- Lightweight and easy to cut
- Lay directly on existing floor
- Panels include radius return for complete and easy install
- EPS 400 can be directly tiled on to

Tools Required:

Stanley/Craft knife
Metal edged rule

Also recommended:

Marker pen
Tape measure
Eye wear
Knee protection
Work gloves



Preparation

EPS 400 boards can be installed on new, existing concrete/screed or wooden floors and must be free from dust, debris, damp and grease or anything that can prevent the adhesive from holding the boards in place.

If you are laying the EPS 400 boards on a concrete or screed floor, ensure that a damp proof membrane is installed.

When laying the EPS 400 boards on a wooden/timber floor, ensure that the floor is firm, secure, and allow any adhesives to dry fully before installing the EPS boards.

When fixing the EPS 400 boards to a non-porous substrate such as existing tiles, clean the tiles with a de-greasing agent such as methylated spirits, coat the tiles and the back of the EPS boards with a spray adhesive, allowing them to both become tacky, test a small patch first to check compatibility, then proceed to lay the EPS boards.

Study the UFH Line Drawing

Before attempting to lay any EPS 400 boards, familiarise yourself with the UFH line drawing, carefully check the direction of the pipe runs and plan the transitional routes back to the Manifold, create a channel along walls where multiple UFH pipes route to other rooms, you can do this by fixing down 2 x 20mm battens with screws, thus creating a channel to route the UFH pipes. Fix one batten at the wall and another one to create the channel.

Cutting the Panels

Use a craft knife or fine-toothed saw to cut the EPS panels as required, allowing for permanent floor fixtures such as kitchen units, internal walls etc. If you are unfamiliar with this system, it is recommended you do a 'dry run' and lay the panels out on the floor first to see how they will line up and to check quantities etc. To prevent damaging the panels you can do this one room at a time as you go along.

If following a pipe layout, carefully check the direction of the pipe runs before cutting the EPS panels.

Using Mapei Ultrabond Eco 380 to secure EPS 400 boards to floor

As an alternative to using a suitable spray adhesive, Hetta recommends the Mapei Ultrabond Eco 380 Vinyl/PVC Adhesive, which is characterised by its strong, rapid initial bond and extended open time and sets to form a tough, elastic film over all kinds of absorbent, stable substrates such as concrete/screed and existing wooden floors. Floors must be free from debris, grease and any other substances that will prevent the adhesive from bonding to the floor. Allow the ECO 380 to fully cure before laying the UFH pipe.



Consumption: 5kg covers 5m²

Apply the ECO 380 to the substrate using a 2mm tooth comb spreader, do not use the ECO 380 to fill out any gaps or uneven substrates as this will greatly increase drying times, uneven concrete/screed floors should be levelled with renovation screed first.

Allow the ECO 380 to become tacky first before laying the EPS boards, this can take roughly 10 – 30 minutes, once ready, lay the EPS boards starting from the furthest corner of the room, work around the outside wall, then once you reach the opposite side of the room return to the beginning and start the next row making sure that all of the pipe runs line up.

Once all EPS boards have been installed, apply adequate pressure on them to make sure that each board has taken to the adhesive, be careful as the boards may slip.

Allow sufficient time for the ECO 380 to fully dry before laying any UFH pipe, usually 24 – 48 hours depending on temperature and room conditions.



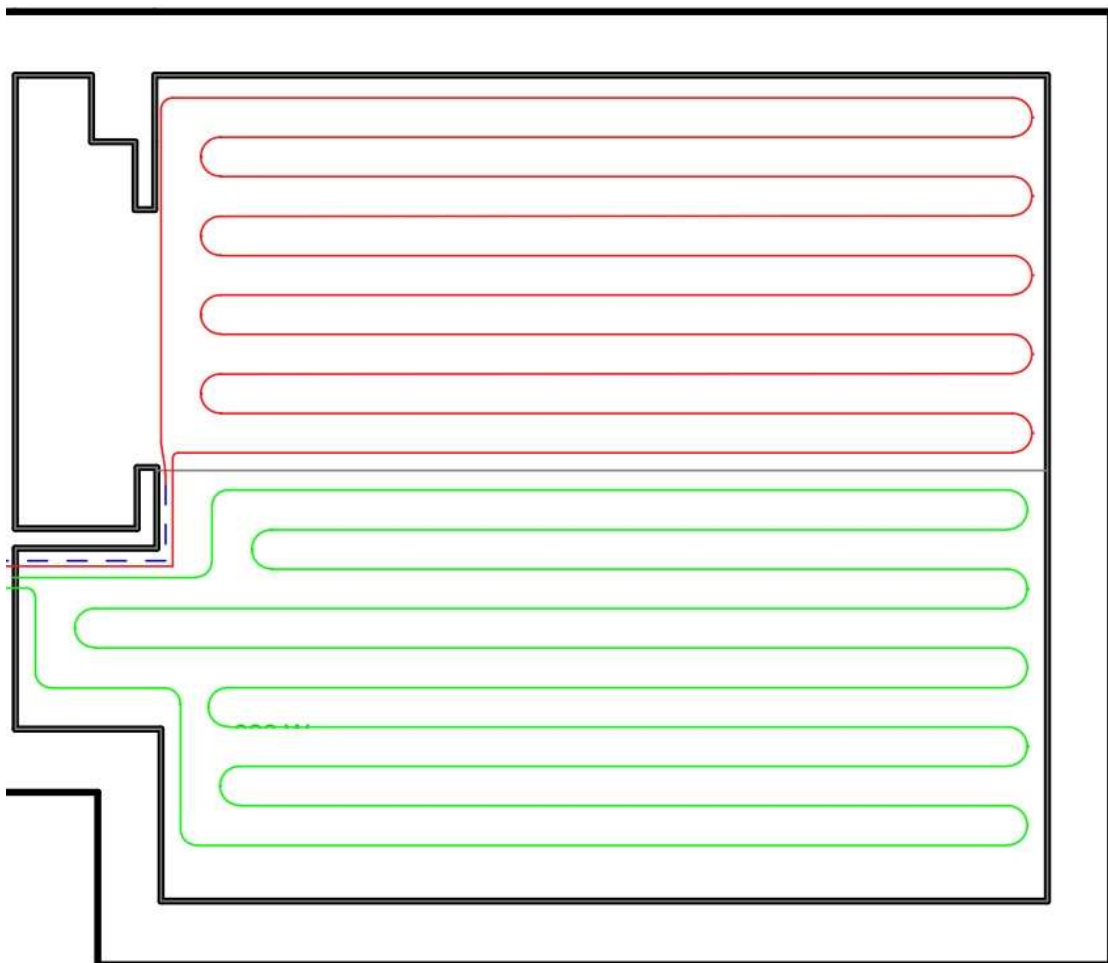
Installing UFH Pipe into the EPS 400 Boards

Ensure that the grooves are free from debris before installing the pipe as it could be damaged during installation if this is not cleared, follow the pipe layout if one is provided, and only cut the pipe once the pipe circuit returns to the manifold.

Start by laying the pipe at the manifold location, allowing for a little extra pipe for the final connection, use permanent marker to label the loop numbers on the pipe so your zones do not cross over.

Walk the pipe into the grooves and radius returns in the panels, if you are not using a pipe de-coiler, rotate the whole coil around the return loops, this will prevent the pipe from twisting.

We advise that you do not bend the pipe before it is installed within the EPS 400 board as there is a risk of kinking the pipe, if this occurs, wrap the kink in cloth and use pliers to reshape.



Method of Installation for Solid Floors (Tiling and Self-levelling)

Primer must be applied neat on the entire surface of the EPS panels if tiling directly or laying a self-level compound (we recommend the Ultra Floor – Prime It, Multi Surface Primer).



Including all unused grooves, the radius returns must be sliced and primer applied (drying time approx. 1 – 4 hours).

Prime the surface of the pipe after installing into the panels, fill empty channels with flexible tile adhesive but do not fill empty grooves with pipe cut offs.

From here you can either tile directly on top of the panels using a suitable tile adhesive such as Ultratile Proflex S2 or Mapei Keraquick cement-based adhesive + Latex Plus additive, or you can install a self-levelling compound prior to laying the tile adhesive/floor covering.

Tiling directly on top of the panels can reduce your total floor build up, however using self-levelling compound will ensure that the pipework is not damaged during the tiling process.

Installing Self-Levelling Compound

Apply the self-levelling compound over the entire floor area (we recommend the Mapei – Ultraplan Renovation Screed 3240) making sure that all voids and gaps are completely filled, the recommended the depth of the self-levelling compound is as follows:



6mm – If Tiling over the top

10mm – If installing Vinyl, Engineered Wood, Laminate or Carpet

Allow to cure for a minimum of 24 hours before any tiling, allowances should be made for any cold or humid atmospheres, (check specification of product used).

Method of Installation for Floating Floors (Engineered Wood, Laminate flooring and Carpet)

If installing engineered wood flooring, allow the floorboards to acclimatise to the indoor room temperature for at least 24 hours as they may swell or shrink depending on the climate.

Note: most engineered wood and laminate floor coverings have a temperature limit of 27 degrees, please check the manufacturers specifications before installing, if this is the case, floor sensor probes are required to be installed under the floor covering to prevent overheating.

We recommend installing the underlay first before laying the floor covering, this will act as a sound dampener and will allow the floor to move freely when expanding and contracting.

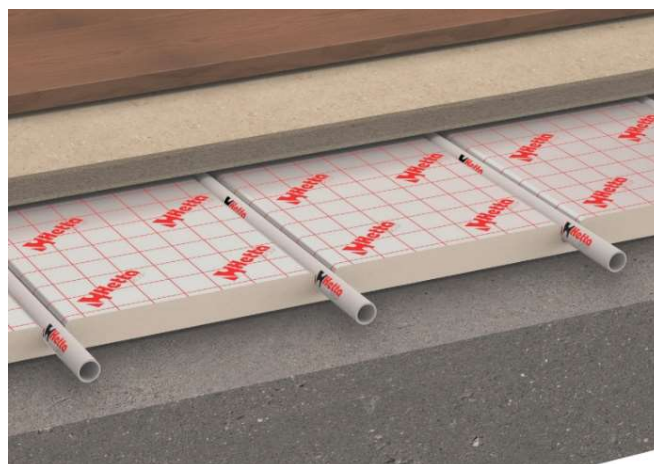
It is important for the underlay to have a vapour barrier underneath the wood to prevent any moisture potentially coming from below which could damage the floor covering.

Note: Beech and Maple woods are not suitable to be used with UFH due to the scale of expansion and contraction potentially causing damage to the wood floor.

When installing laminate flooring, they should be glued or connected together according to the manufacturer's specifications, check if your laminate flooring already comes with a vapour barrier attached before considering installing the underlay.

If installing carpet, use 6mm plywood sheets screwed down with countersunk screws, keeping in mind the position of the UFH pipe underneath. Note that with this installation method we would recommend that the heating source is a boiler, if a low temperature system such as an air source heat pump is used then this will negatively impact the heat recovery of the zone.

The combined TOG value of the carpet and underlay should not exceed 2.5 TOG, anymore and this will reduce the efficiency of the heating system.



Product Code	Description	Length	Width	Height
HSEPS400	EPS 400 Panel 150mm Centres	1200	600	20
HSEPS400FOILED	EPS 400 Panel 150mm Centres Foiled	1200	600	20