

SNUG

UNDERFLOOR HEATING

LOW PROFILE CASTELLATION MAT SYSTEM

INSTALLATION GUIDE

A DIVISION OF



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INTRODUCTION

Our Snug Low Profile Castellation Mat system makes installing underfloor heating onto existing floors like screed or concrete simple. Ideal for installations when height is a concern, this offers a low-profile solution. This system can also be placed on top of a firm insulation.

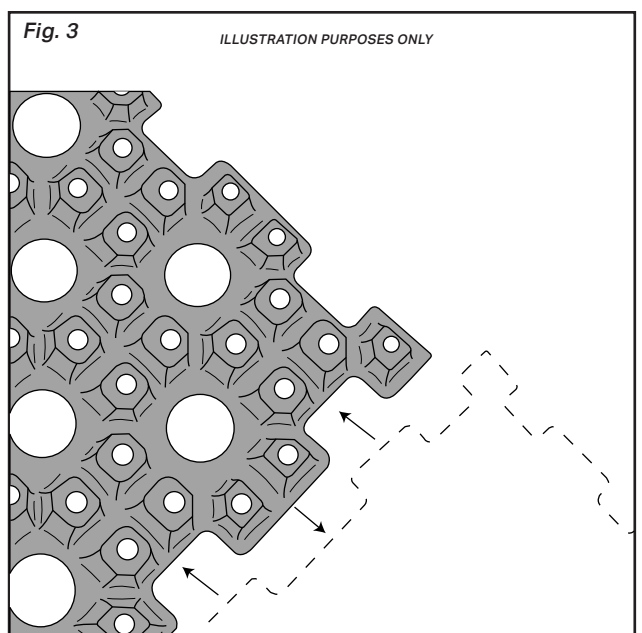
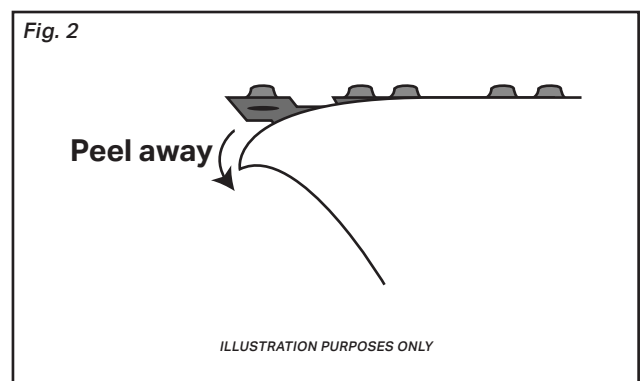
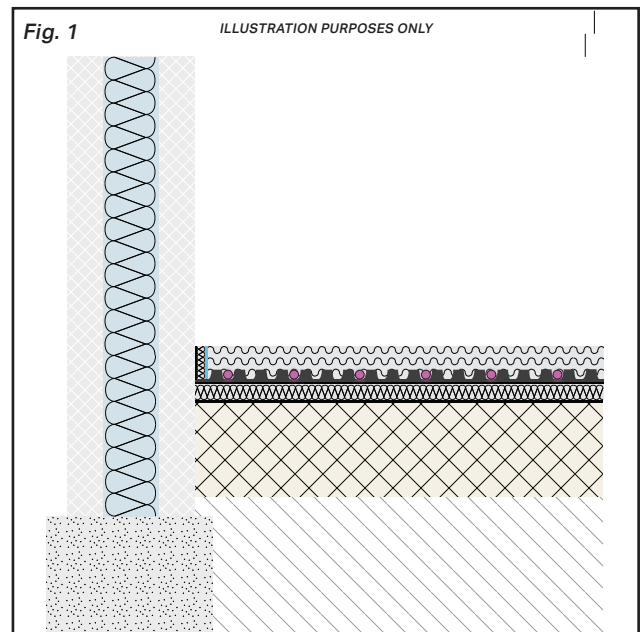
STEP ONE: PREPARATION

It's essential to ensure that the floor is level, providing a solid foundation for the underfloor heating system. We recommend insuring there is an ample amount of insulation below the underfloor heating before installing. If there is no insulation under the existing floor, a superfoil or a small amount of firm insulation can be used to help with insulation (Fig. 1).

STEP TWO: LAYING CASTELLATION MATS

Begin to lay the mats down by removing the cover to expose the adhesive backing (Fig. 2), stick the mats down carefully and evenly in all heated areas.

The mats slot together easily by lining up the protruding section of one mat with the open area of the next. (Fig. 3).

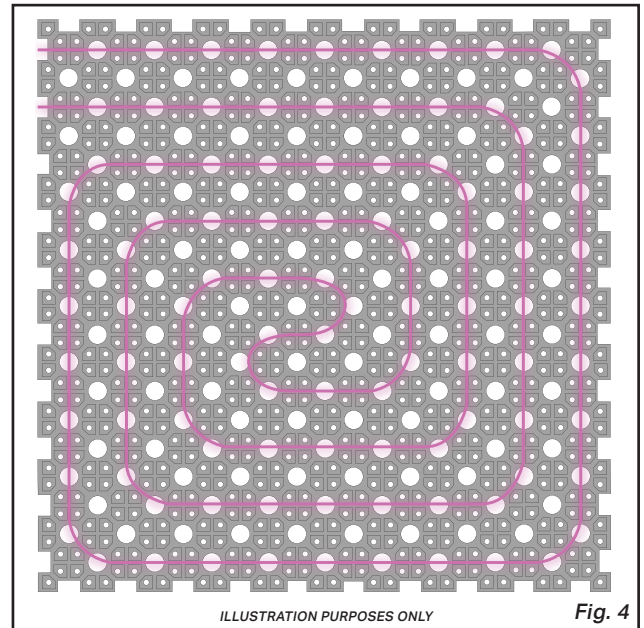


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STEP THREE: INSTALLING THE PIPE

Follow the Snug Pipe Layout design and insert the pipe into the Low Profile Castellated Mats accordingly.

The pipework will be designed in a spiral pattern where possible for an even and more efficient heat output. This involves running the pipe around the edge of the room and making your way to the centre at double spacings, once at the centre, working your way out through the middle of the already laid pipe (Fig. 4). Please read page 5 for more information.



STEP FOUR: PRESSURE TESTING

After installing all of the pipework, it is crucial to perform a thorough pressure test before proceeding with the self leveling process. Refer to our Pressure Test Guide, available on our website, for detailed instructions.

STEP FIVE: SELF LEVELING COMPOUND INFORMATION

Self leveling compound **MUST** be used rather than screed. The minimum height of self leveling compound for the system is 18mm.

During the self leveling process, you must keep the system pressurized, maintaining a minimum of 3 bar, using water instead of air.

Before activating the underfloor heating system, it is essential to allow the self leveling compound time to fully cure. Operating the system prematurely may compromise the moisture content, risking floor failure.

Initiate the initial warm-up at least 7 days after self leveling compound application or in line with the manufacturer's instructions. During this phase, set the mixing valve to supply a temperature between 20°C and 25°C, maintaining it for a minimum of 3 days.

Following this, gradually increase the flow temperature in increments to the designed maximum, holding it for an additional 4 days.



WARNING



If the pipe gets kinked during the installation process, replace the coil.



Ensure that the ambient temperature during pipe installation is at least +5°C.

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EXPANSION JOINTS

When incorporating expansion joints in heating screeds intended for stone or ceramic coverings, adhere to the following guidelines: Joint areas should not exceed 40m² with a maximum length of 8m.

In rectangular rooms, joint areas can surpass these dimensions, but the maximum length should be in a 2 to 1 ratio. If induced contraction joints are placed in heating screed, these may be cut to a depth not exceeding one-third of the screed thickness, considering the location of the pipes. Ensure these joints are sealed after heating up to maintain the system's effectiveness and durability.

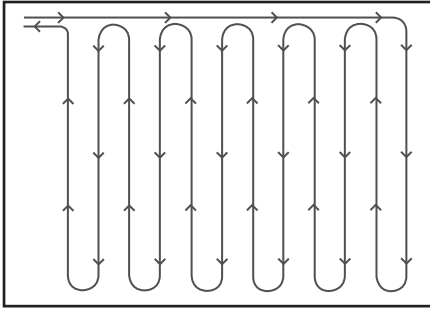
WOOD FLOORING

When installing hardwood floors, ensure the timber has a moisture content of 8-10%. It's essential to verify with the flooring supplier that the chosen floor is compatible with underfloor heating.

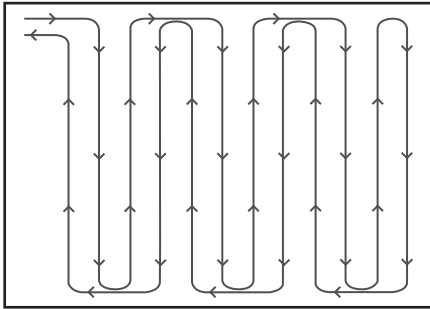
For tongued and grooved joints in the floor, use PU adhesive or a PVAc adhesive compliant with durability D3 of BS EN 204. Maintain a minimum 10mm gap along the floor's perimeter under the skirting to allow for potential floor swelling from moisture changes. Remove all wedges used during flooring installation once the process is finished.

For the system's initial setup, adjust the mixing valve to provide a temperature ranging from 20°C to 25°C, maintaining this for at least 3 days. After this period, you can raise the flow temperature to the designed maximum, ensuring this level is maintained for an additional 4 days to finalise the installation process.

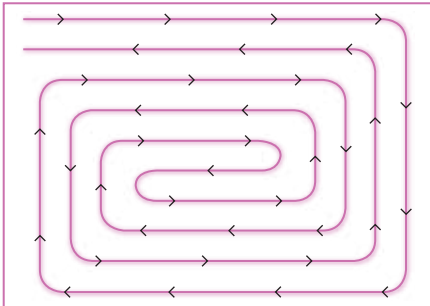
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Serpentine - The pipe will run the length of the heated area before running back and forth through the heated area.



Double Serpentine - The pipe will run back and forth through the heated area at a 3-to-1 ratio. Once reaching the far end of the area, the pipe will run back on itself at the correct spacings filling any gaps.



Spiral - The pipe will run around the edge of the room making its way to the centre at double spacings, once at the centre, the pipe will work its way out through the middle of the already layed pipe.

*The highlighted pattern is the best recommended pattern for this system.