

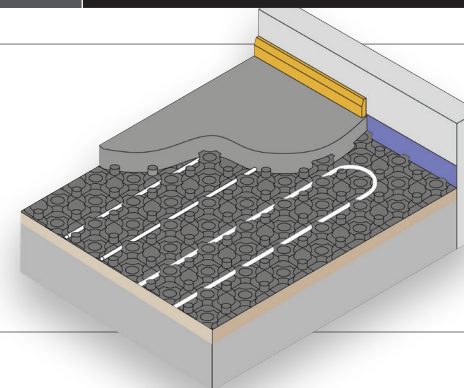
## Solid Floor Pipe Tray

For Underfloor Heating in Screeded or Solid concrete floors using strong lightweight pipe trays that are quick to lay and easily cut to size and shape, forming a rigid guide for laying pipe.

The trays are laid over insulation and edged with perimeter strip to maximise system performance.

### Suitable for use with:

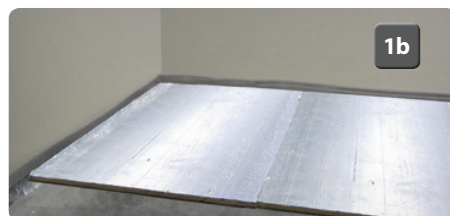
- Traditional Screed
- Pumped Screed
- Dry Sand & Cement mix
- Chemical Screed
- Concrete



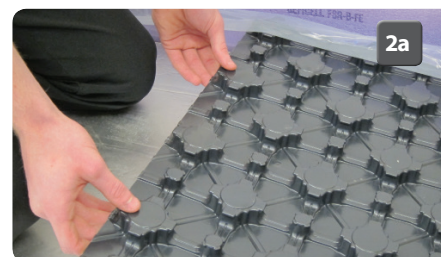
## Step by Step instructions

**1** The Area where pipe and staples are to be laid should be clean, level and free from debris. In accordance with current Building Regulations insulation material should be included in the floor construction, ideally directly below the pipe. This will minimise any downward heat loss and ensure optimum performance. Place the insulation panels directly on the sub floor **(1a/b)**, and cover joins with tape **(1c)**.

Perimeter strip should be installed around all outer walls and fixed items for example stairs and columns. This allows expansion of the floor screed and isolates the screed from the surrounding structures **(1d)**.



**2** The trays are laid flat on the insulation and up against the perimeter strip with the polythene skirt laying on top of the insulation and tray **(2a)**. The next tray overlaps the first tray by interlocking the castellated nodule over the tray below **(2b)**. The trays should not be used around the immediate floor area below the manifold as pipes will be closer together than the trays allow.

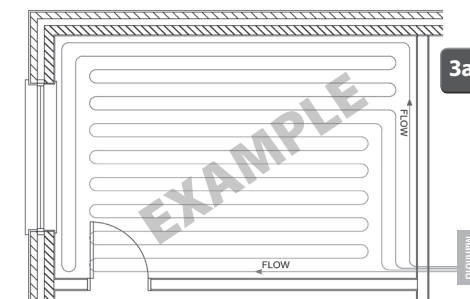


## Laying the pipe in the trays

**3** First study the pipe layout (if you have requested them) and familiarise yourself with the design and layout **(3a)**. The performance of your floor heating relies more on the amount of pipe in the floor than following the design exactly.

Start laying pipe in the manifold location. this will

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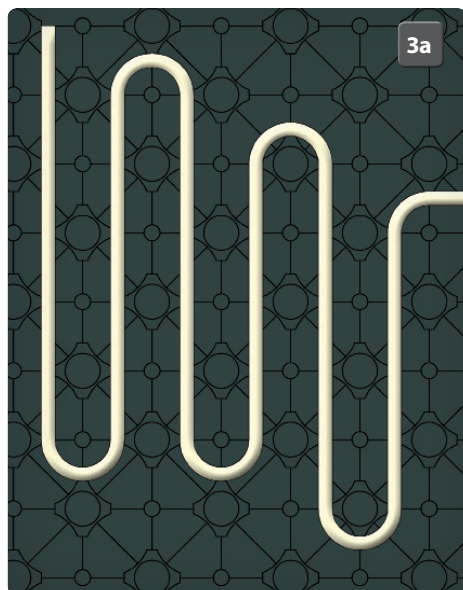
## Laying the pipe in the trays *Continued*

give a fixed reference point for the start and finish of each loop of pipe. Measure the pipe centres and translate the plan onto the pipe trays as shown in the pipe layout drawing **(3a)**.

Be careful not to kink the pipe with a sharp bend. It is not necessary to follow the design exactly. If a sharp bend or return is likely to kink, it is better to produce a 'light bulb bend' **(3b)**. You may cut away the raised plastic knobs with a craft knife to achieve a suitable light bulb bend. The performance of the floor heating will not be affected. The pipe is marked every metre so that you can keep an eye on when to go back to the manifold.

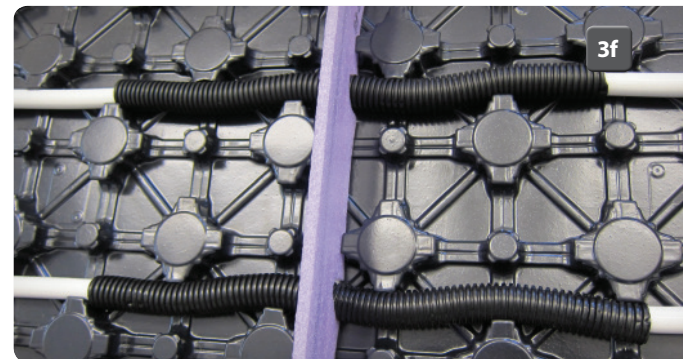
Work with two people when laying the pipe; one person walks along rolling out the pipe and the other person follows behind to push the pipe into the panel, securing the pipe between the raised knobs. Pipe around the outside of an area needs to be fitted over the polythene skirt **(3c)**, this will prevent any movement in the trays when the screed is applied.

2



## Conduit and expansion joints

A 400mm length of pipe conduit should be fitted around pipe work where it passes through internal walls or doorways or whenever any pipe work passes through an expansion joint **(3f)**. It is recommended that an expansion joint is constructed for every 40m<sup>2</sup> of screeded floor area at a maximum length of 8m. An expansion joint may also be required in long narrow areas such as corridors. A length of perimeter strip is used to provide the expansion joint.



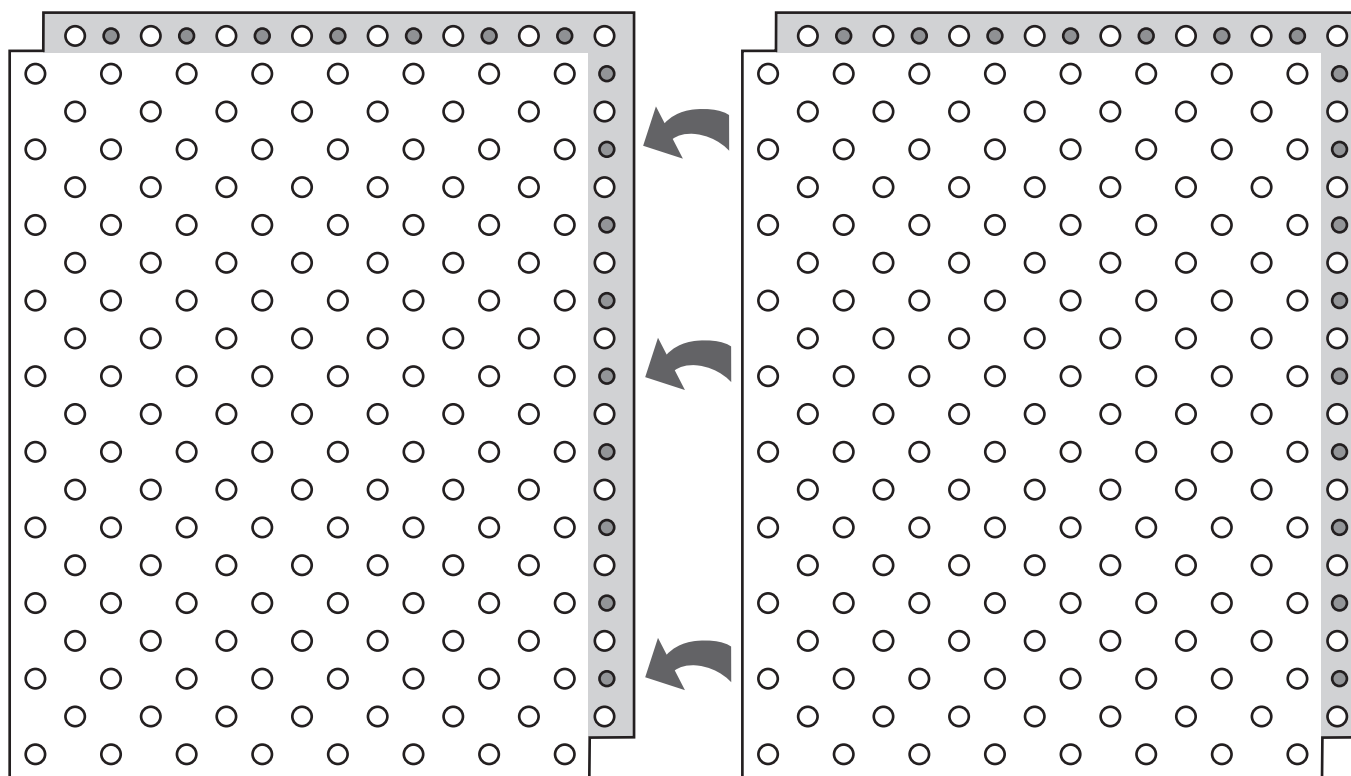
## Screeding

**4** A minimum traditional concrete screed thickness of 65mm should be used for domestic and light commercial use **(4a)**. Specialist screeds such as Anhydrite and Polymer modified screeds will vary depending on the construction requirements. This information can be supplied by a specialist screed supplier.

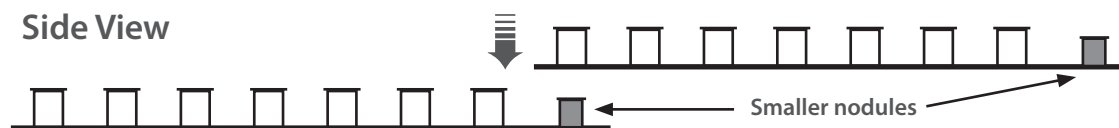


The screed should be allowed to dry naturally and under no circumstances should the underfloor heating system be used to speed up the drying times as this could effect the integrity of the floor. Once the screed has fully dried, heat from the underfloor heating system can be introduced slowly, by raising the flow temperature gradually over a period of a week until the desired temperature is reached (max 45°C).

### Positioning the pipe tray panels



### Side View



Each panel has one long and one short edged with smaller nodules (marked by darker circles between each nodule).

These are designed to fit into the corresponding larger nodules the neighbouring panel.





### Key Information

Maximum heat output	100 W/m <sup>2</sup>
Recommended flow temperature	45°C*
Maximum loop length	100m (16mm MLC Pipe)
Pipe centres	150-350mm (Depending on specific job)
Tray size	1080mm x 720mm x 17mm
Preformed PS Sheeting, 1mm thick with knobs.	
The system has 2 preformed PS flaps with hollow knobs 75mm wide.	
Suitable for pipe diameters 14-20mm.	

### Important Information

\*Limiting floor surface temperature to a maximum of 27°C, by using floor probes, is essential when using wooden floor finishes. Specialist timber floor suppliers should be contacted to obtain expert advice on your chosen floor finish. The addition of carpet and rugs on wooden floors can increase the temperature between floor and carpet. Make sure the combined tog value of carpet & underlay does not exceed 2.5 tog. Total thickness of any wooden or laminate floor finish should not exceed 25mm.

*"When mixed floor solutions are being served from the same manifold, a floor probe must be used in the floor solution with the lower maximum supply temperature. This is to limit the temperature in these floor areas and prevent damage to the floor solution and/or floor finish."*

### Your notes:

