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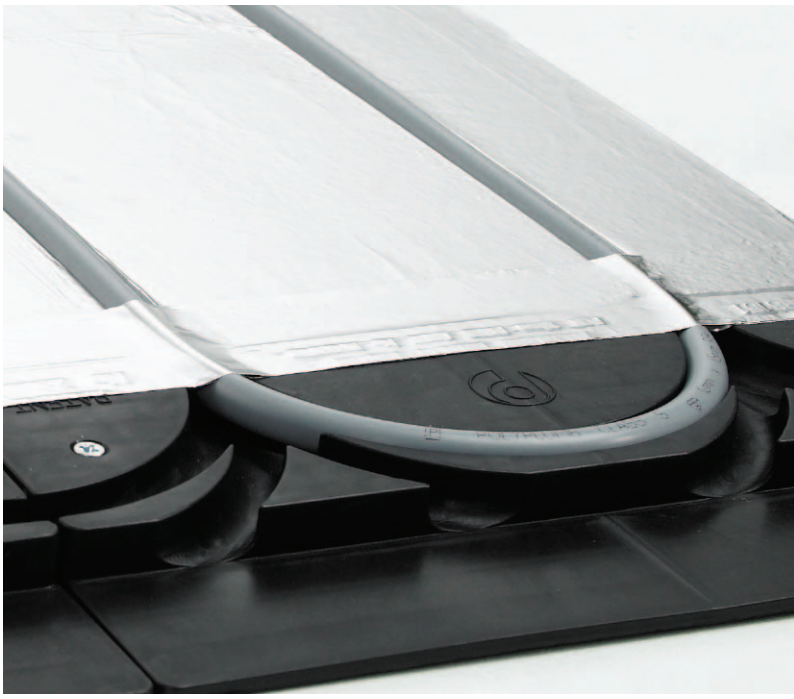
EFFECTIVE: 22ND APRIL 2009	

OVERLAY

Underfloor Heating
That Fits **Over Existing Floors**

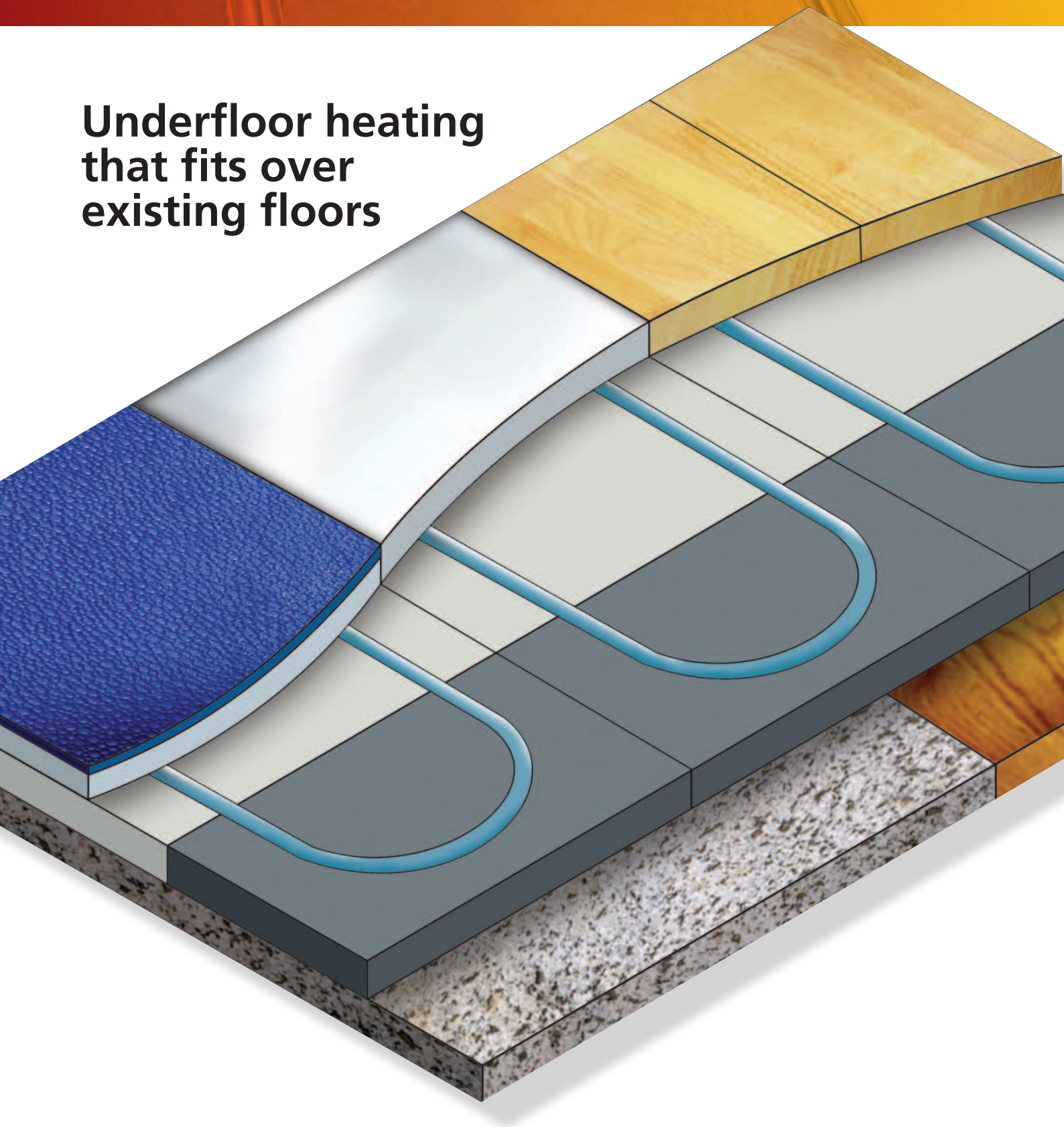


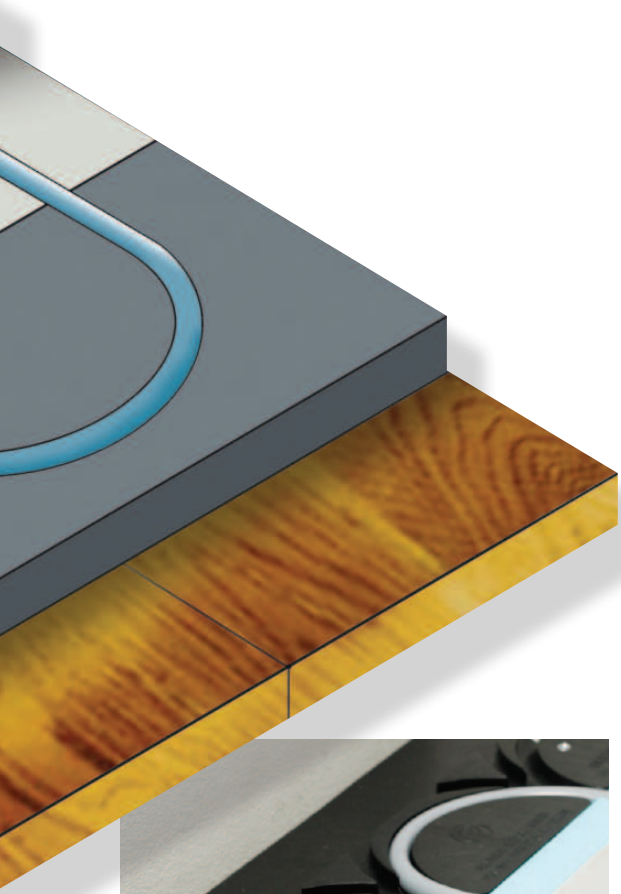
Overlay™

Product Guide

Polypipe

Underfloor heating that fits over existing floors





Overlay™ is a unique low profile floor heating system ideal for both renovation and new build projects.

Installed over the existing floor and only 18mm in depth, Overlay™ allows floor heating to be installed where traditional underfloor systems would either require expensive excavation or would require the floor to be raised to an unacceptable level.

The Overlay™ system is available in 2 panel types to allow for installation to all build types and floor coverings.

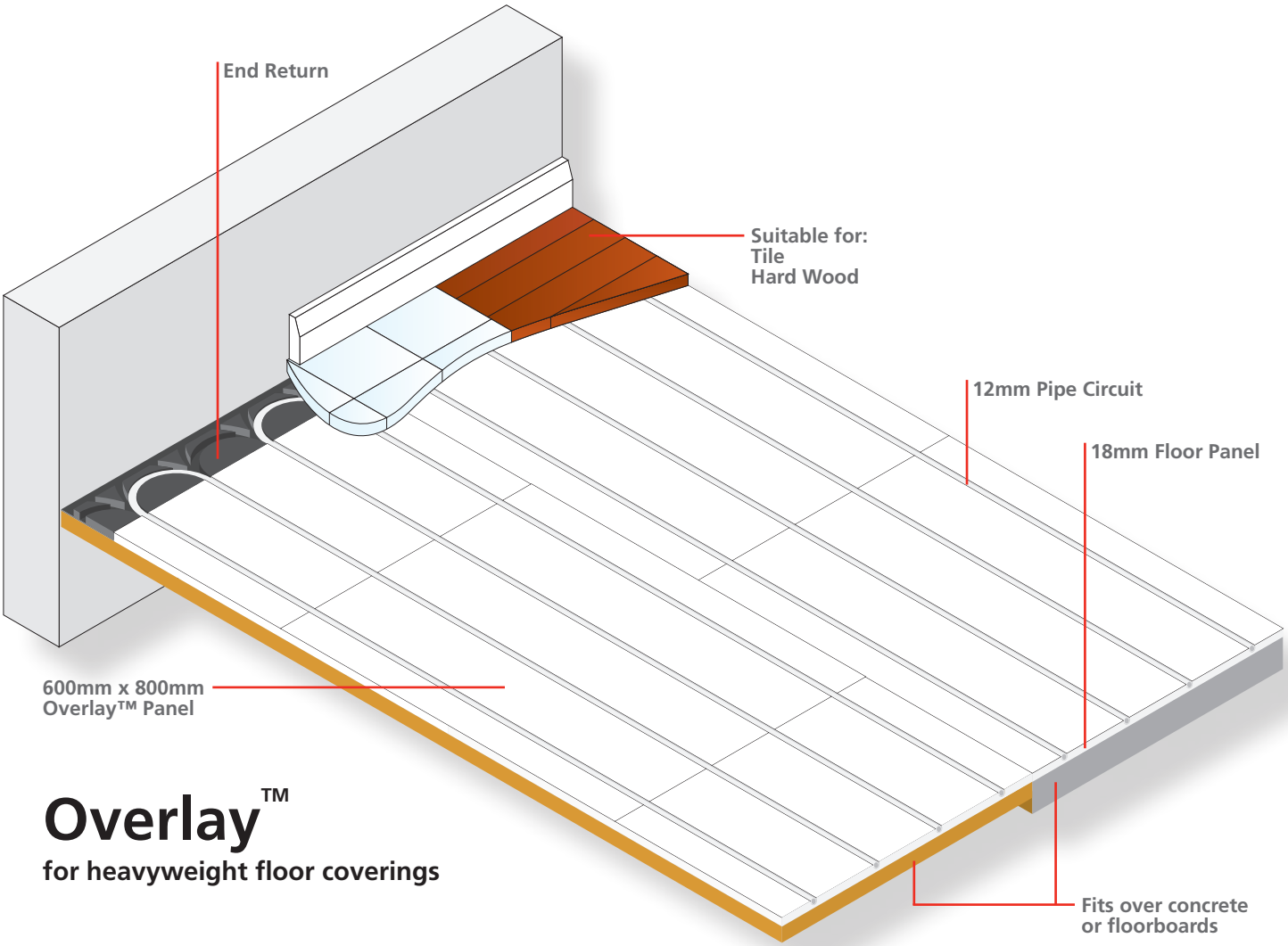
Overlay™ panel is a fibrous panel used for heavyweight floor coverings such as ceramics, or where the floor covering needs to be secured directly to the panel e.g. solid wood.

Overlay™ Lite is a high compressive strength lightweight insulated panel used for lightweight floor coverings e.g. laminate, engineered wood, carpet etc. Due to its ease of handling and cutting it is also more suitable for larger areas and multiple room installations. Overlay™ systems use a 12mm pipe at 150mm pipe centres and provide excellent response times and heat output compared with traditional built in underfloor solutions and are therefore ideal for both traditional heating systems and low temperature renewable systems.

Overlay™ choice

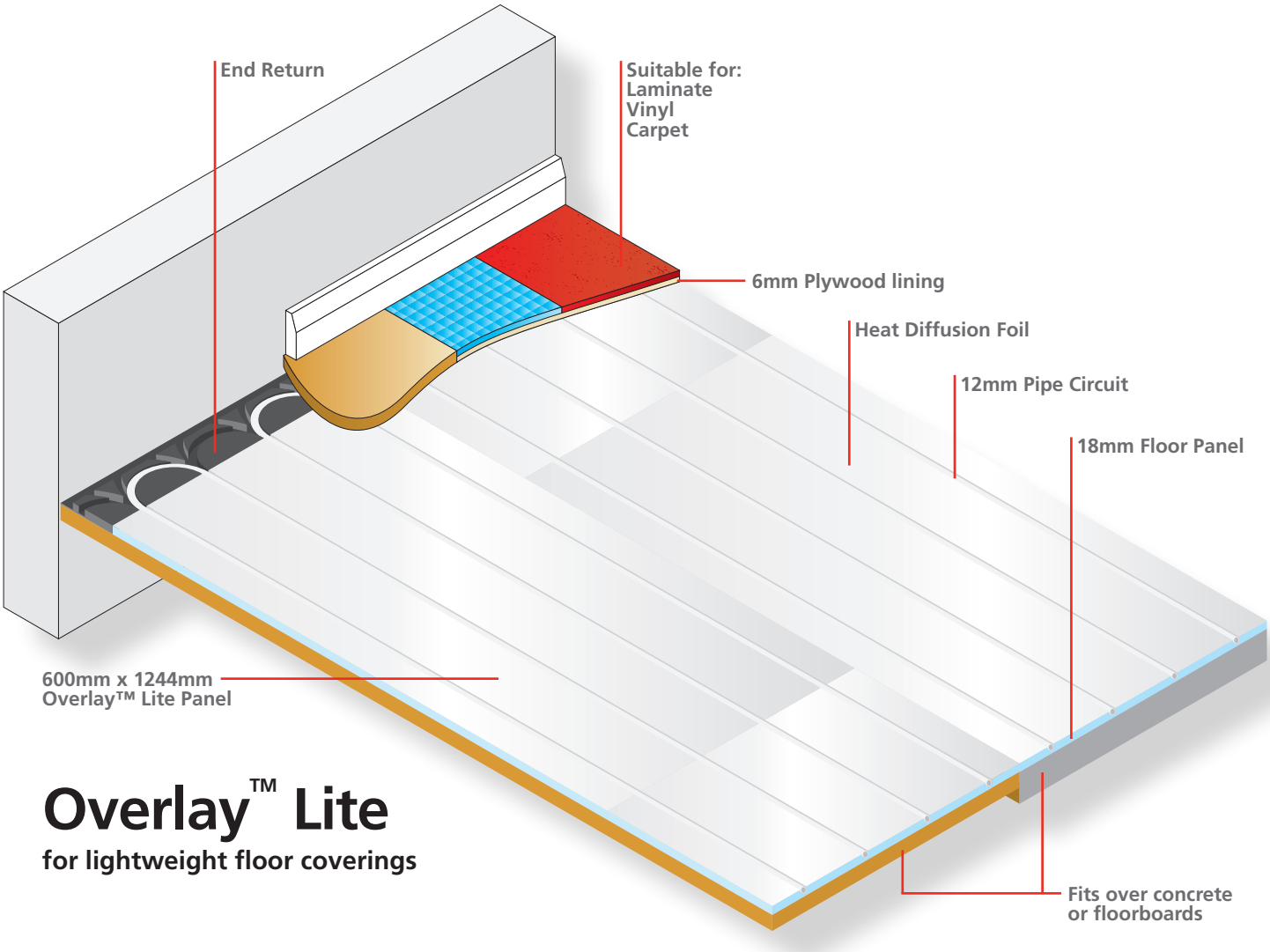
Overlay™ accommodates all types of project and floor coverings and the only choice is that of which panel will be most appropriate for the installation. Both Overlay™ and Overlay™ Lite can be used for the majority of projects, however as Overlay™ Lite is the quickest and easiest system to install, this should be the first consideration for most projects.

The more structural nature of Overlay™ however makes it ideal for direct tiling or application of floor finishes which need to be fixed or screwed to the panel.



Overlay™

for heavyweight floor coverings



Overlay™ Lite

for lightweight floor coverings

Key design and installation information	
Maximum heat output	Approx. 100W/m²
Recommended design flow temp	45° to 50°C
Maximum circuit length	80m
Maximum coverage per circuit	12m²
Material requirements (approx)	
Overlay™ floor panel	Coverage 0.48m²
Overlay™ Lite floor panel	Coverage 0.75m²
Pipe	7m length/m²
End returns	1 return bend per floor panel
12mm x 80m coil of pipe	1 coil per circuit
15mm x 12mm adaptors & stiffeners	1 pack per circuit

Project type	Overlay™	Overlay™ Lite
Single room / small areas	Yes	Yes
Multiple room / large area	With careful planning	Yes
Floor covering	Overlay™	Overlay™ Lite
Tiles / slate / other ceramics	Direct	With plywood overboard
Natural wood	Direct & fixed	No
Laminate & engineered laminate	Yes	Yes
Carpet & vinyl	With plywood overboard	With plywood overboard

Pre-installation requirements

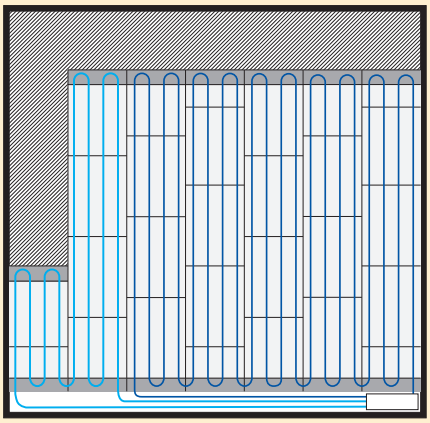
Planning

Planning the Overlay™ system prior to installation will save time during installation and maximise the use of products.
The direction the pipe runs to and from the ZRU or manifold and use of the return bends will be the main considerations.

The end returns have a flat panel which forms a channel to allow the routing of pipes to multiple circuits in the room. This can be removed where necessary.

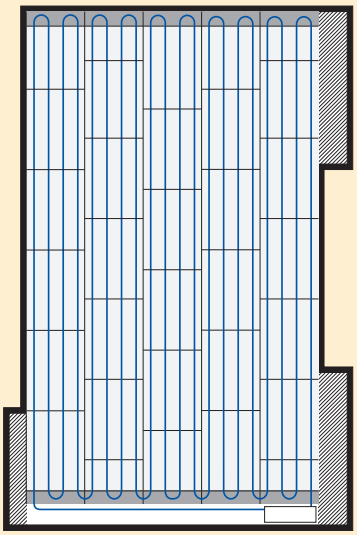
Floor areas which don't require pipe circuitry e.g. beneath kitchen cupboards or sanitary ware can be 'blanked' using 18mm plywood or chipboard. This will make better use of the Overlay™ products. This can also be used to 'square off' rooms with irregular walls.

Example of 'blanking' on kitchen plan



Example of 'blanking' in a bathroom

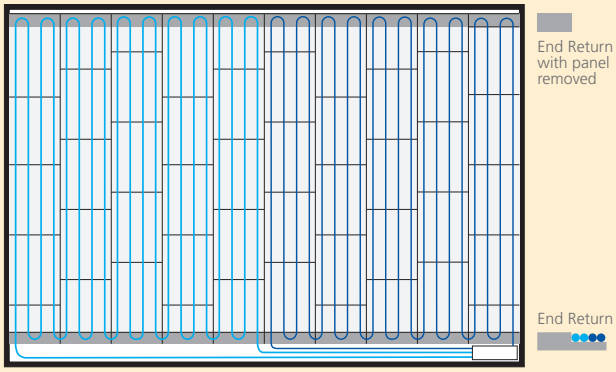
Example of 'squaring off' an irregular room plan



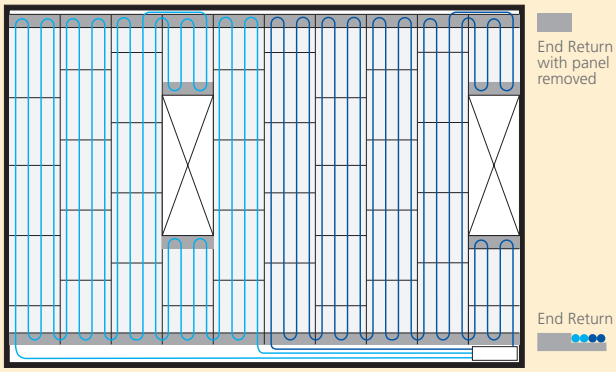
Room layouts

The following diagrams show some examples of room shapes, pipe requirements and interruptions (pillars, hearths, etc.) which need to be accommodated.

Room with 2 circuits



Room with pillars/hearth

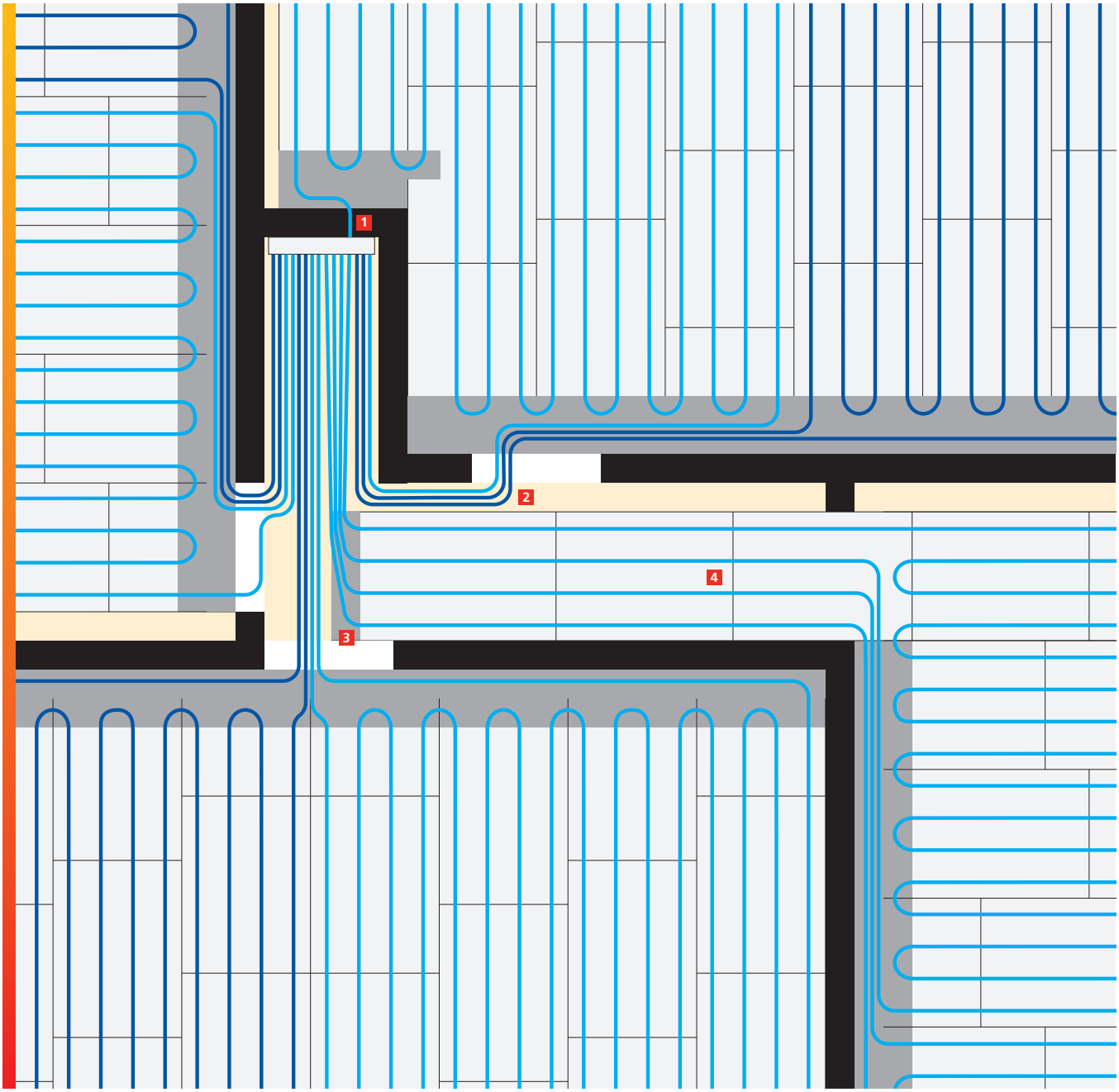


Pipe layouts in multiple room installations

Multiple room installations require several circuits and careful planning is required close to the manifold to allow for all pipes to be accommodated.

1 Wherever possible pipes can simply go through rather than round walls to eliminate the number of pipes requiring access through the entrance of the manifold cupboard.

2 Alternatively leave voids at the edge of the panels.
3 Using return bends as routers or 4 using supply pipes to heat corridors are all ways of managing the installation in this area.



Overlay™
for heavyweight floor coverings

Installation

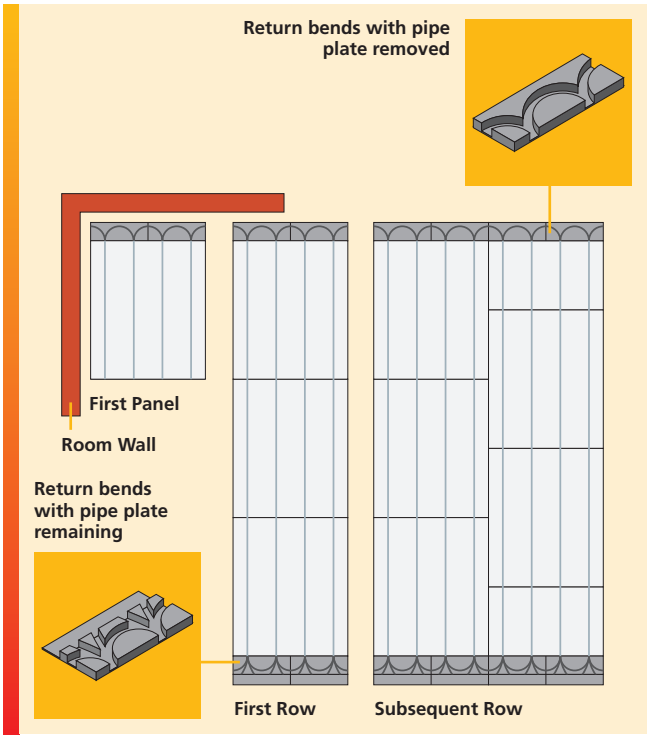
Cutting the panels

Panels can be cut using a hand saw or jigsaw set at a low speed. (Cutting these panels will generate dust so should either be done outside or in a ventilated room. Ensure you wear a particle mask.)

Laying end returns

Step 1:

Start by fixing two end returns to the floor in a corner of the room. (Remove the pipe panel if not required as per your floor plan). This should be done by using suitable screws in the screw holes of the end return panels when fixing to a wood floor or by using Overlay™ adhesive (code PB777) to bond the end returns to solid floors.

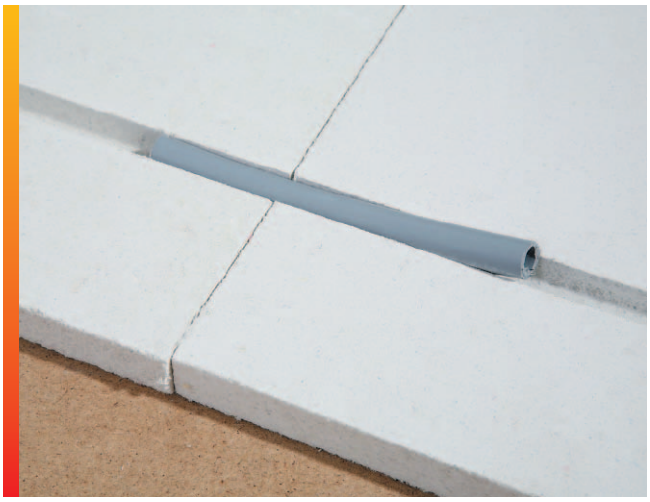


Laying the panels

Step 2:

Clean down the edges of the panel and apply a 3mm bead of adhesive to the top edge. Then, lay it ensuring you line up the grooves in the panel with those in the end returns. Continue to lay the first row of panels gluing each joint to achieve a secure installation.

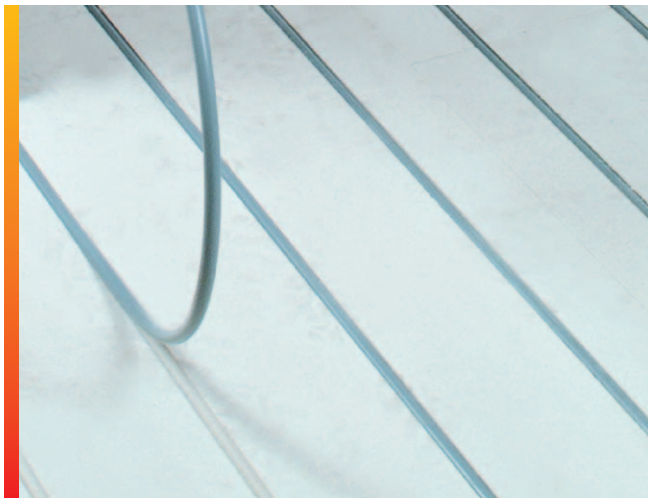
When gluing the ends, ensure there is no residual glue in the pipe grooves and use short lengths of pipe to help with panel alignment.



Step 3:
When you get close to end of the first row fit two end returns against the wall as in step 1 and if necessary cut an Overlay™ panel to fit and complete the first row.

Step 4:
Once you have completed the first row begin the process again, gluing the ends and sides of each panel, staggering the panels in the second row in a brickwork pattern and continue until the room is complete.

Laying the pipe
Step 5:
Starting from your manifold position and allowing enough pipe for connections lay the pipe into the grooves of the Overlay™ panel in accordance with your plan.



Finishing

Using a floor filler/grout fill any gaps and voids, and fill around any pipework.

Tiles can be laid directly on to the Overlay™ panels or a 6mm plywood lining can be fitted prior to tiling.

When tiling directly over Overlay™ panels, use a sealant with flexible adhesive and grout.

If fitting solid wood floors they can be discretely screwed through the tongue and groove directly into the Overlay™ panel avoiding pipe circuitry, to minimise movement in the floor covering.

If over-boarding with 6mm plywood, this can be glued, stapled or screwed to the Overlay™ panel, avoiding the pipe circuitry.

Plywood cover where required

Overlay™ Lite
for lightweight floor coverings

Installation

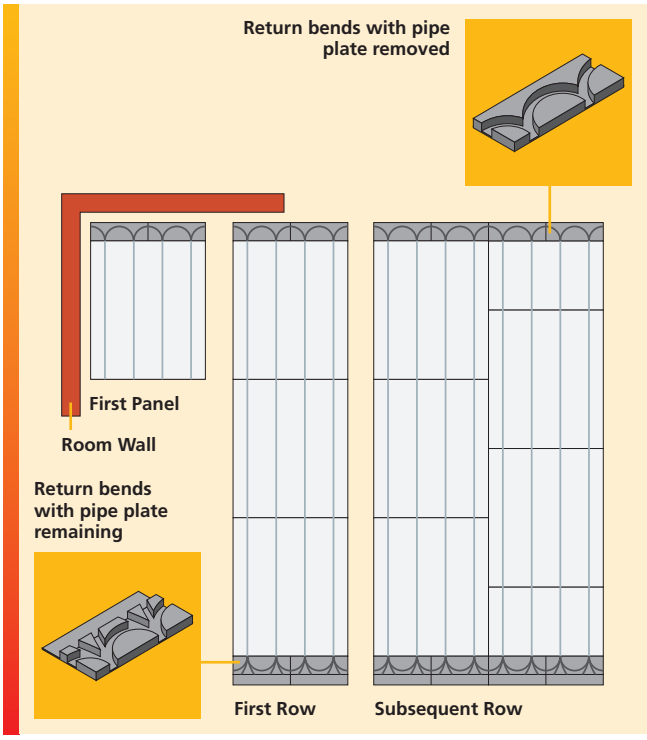
Cutting the panels

Panels can be cut using a sharp knife and a metal rule.

Laying end returns

Step 1:

Start by fixing two end returns to the floor in a corner of the room. (Remove the pipe panel if not required as per your floor plan). This should be done by using suitable screws in the screw holes of the end return panels when fixing to a wood floor or by using Overlay™ adhesive (code PB777) to bond the end returns to solid floors.



Laying the panels

Step 2:

Lay the panel ensuring you line up the grooves in the panel with those in the end returns then continue to lay the first row of panels using short lengths of pipe to help with panel alignment.

Step 3:

When you get close to end of the first row fit two end returns against the wall as in step 1 and if necessary cut an Overlay™ Lite panel to fit and complete the first row.

Step 4:
Once you have completed the first row begin the process again with the second row staggering the panels in a brickwork pattern.

Step 5:
Use the self adhesive foil tape along the long panel joints to securely fix the panels to the adjacent row.

Step 6:
Now continue this process, completing the whole room.

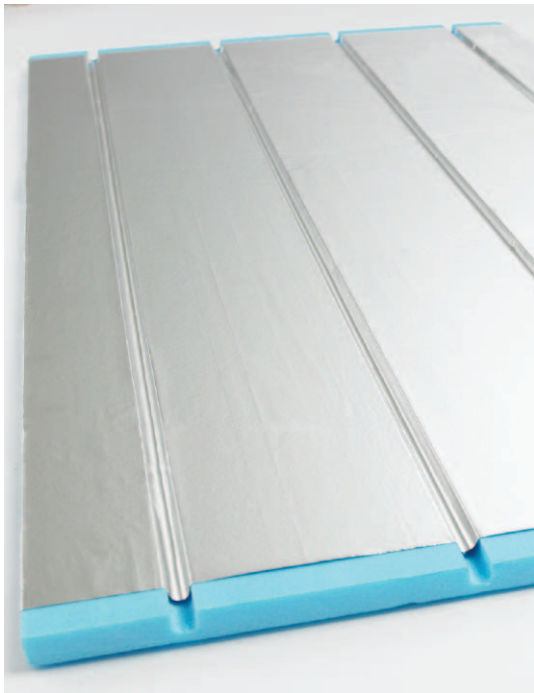
Laying the pipe

Step 7:
Starting from your manifold position and allowing enough pipe for connections lay the pipe into the grooves of the Overlay™ Lite panel in accordance with your plan.

Step 8:
Once you have finished laying the pipe use the self adhesive foil tape to secure the panels and pipe running across all the panel joints and do the same across the joints where the panels meet the end returns.

Finishing

Laminate and engineered wood can be laid directly over Overlay™ Lite panels. Where carpet or vinyl is being fitted, first fix a 6mm layer of plywood using a contact adhesive, then continue to lay the floor covering as normal. It is advisable to mark out pipe positioning to avoid stapling pipes when fitting carpets.



Overlay™

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