



Floating Floor Systems



Underfloor heating for floating floors

The **Polypipe floating floor system** is designed for use in applications where a solid floor installation is not suitable due to structural weight limitations or where a 'dry build' floor option is required. Suitable for use in either new build or existing properties, the floating floor panels can be installed directly on top of both solid and timber floors.

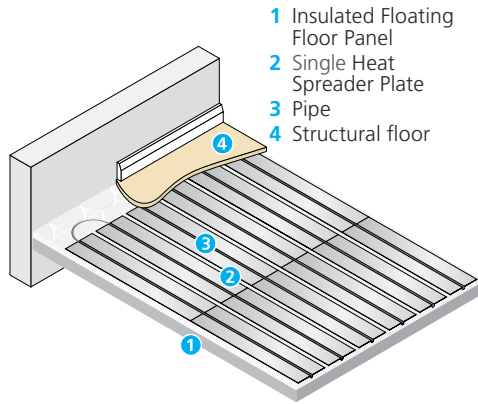
The 50mm thick high density polystyrene panels have a thermal value of 0.036W/mK and can be used to enhance the thermal insulation requirement of the floor structure as required under current Building Regulations.

However, care should be taken when installing floating floor panels on top of a primary insulation layer to ensure that excessive deflection does not occur in the final floor construction. It is therefore recommended that any other insulation materials used below the floating floor panels are of a high density construction (100kN/m² @ 10% compression min).

Design and materials

Key design information	
Typical heat output at 60°C mean water temperature	Approx. 52W/m ²
Recommended design flow temp	60°C
Maximum circuit length	80m (15mm pipe) 100m (18mm pipe)
Maximum coverage per circuit	25.8m ² at 300mm centres (15mm pipe) 30m ² at 300mm centres (18mm pipe)
Material requirements (approx)	
Pipe	3.1m/m ² at 300mm centres
Floating Floor Panel	1 panel/1.4m ²
Single Spreader Plate	3 plates/m ²

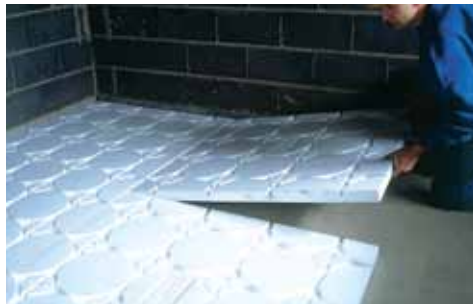
Installation



Prior to installation it is recommended that the building is secured against the elements and that the sub floor is level, free from any mortar or plaster residues and is swept clean.

Step 1: Laying the floating floor panels

Lay the 1200 x 1200 x 50mm floating floor panels directly over the entire floor area to be heated, ensuring the panel grooves are aligned. The panels can be cut to fit where necessary. A void in the insulation is often retained around the edge of the room to allow for distribution pipes to be laid from the room to the manifold.



Step 2: Laying the spreader plates

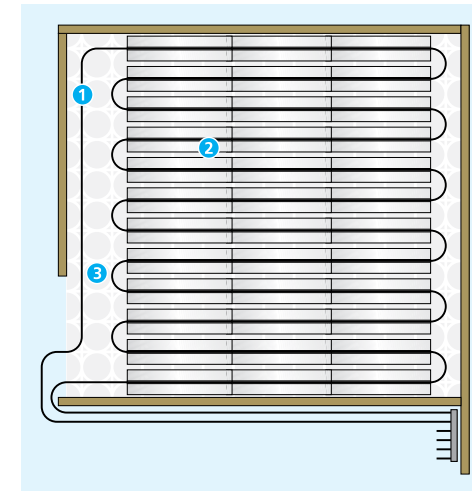
Single heat spreader plates that have pre-formed grooves at 300mm centres need to be laid on top of the floating floor panels. These plates ensure an even spread of heat across the floor area and hold the pipe firmly within place in the floating floor panel.



Step 3: Laying the pipe

Once you have completed laying the floating floor panels and heat spreader plates the pipe can be fitted into the pre-formed grooves of the heat spreader plate. Start at the manifold position and use the grooves in the floating floor panel to loop round the entire room.

The maximum circuit length is 80m using 15mm pipe or 100m using 18mm pipe. Pipe should be laid in the pattern shown below.



- 1 Barrier Pipe
- 2 Single Heat Spreader Plate
- 3 Insulated floating floor panel

IMPORTANT NOTE:

Areas of potential high point loading, e.g. under heavy furniture kitchen units and appliances, will require additional floor support. Timber battens (50mm x 50mm) should be positioned between the floating floor panels and notched to allow the passage of pipes.

Step 4: Testing

Once the pipe circuits have been installed and connected to the manifold the system should be pressure tested to 6 bar for a minimum of 1 hour before the timber floor covering is laid. It is recommended that the system remains under pressure whilst the flooring is laid.

Finishing

The room can then be finished by fitting 18mm or 22mm tongue and groove sheets of chipboard, glued on the edge, over the floating floor system. Mark the position of the pipe where door thresholds or carpet strip are to be installed.

When laying a ceramic or stone floor covering ensure that any deflection in the floor is minimised. It is recommended that a slip mat or uncoupling membrane is used rather than a second layer of wood.