

FLOOR CONSTRUCTIONS

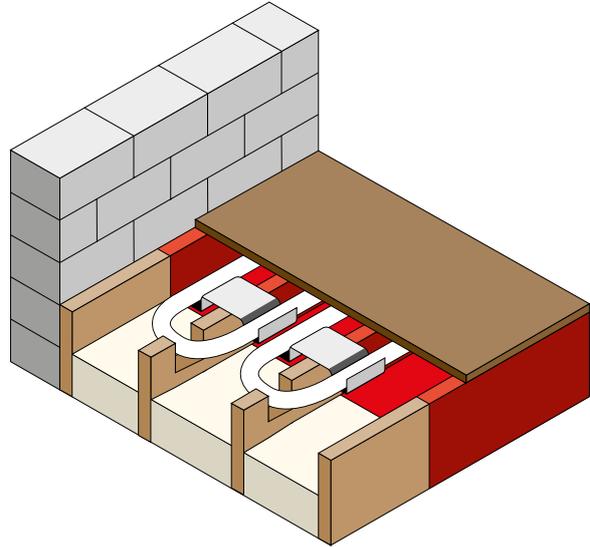
Suspended Floors - Mainfoil System

Overview

Uses a bubble aluminium foil which laps up and over the joists to create a sealed air void. The aluminium foil reflects the radiant heat up to the underside of the floor, which in turn heats the room.

Features and Benefits

- Ideal for Underfloor Heating installations on upper floors.
- Easy and fast installation of foil and clips.
- Ideal for retrofit installation without disturbing the ceiling below.
- Allows for slightly more irregular joist centres than the Suspended Floor Heat Emission Plate system.



Key Components

Maincor MLCP, PE-RT/AL/PE-RT Coils



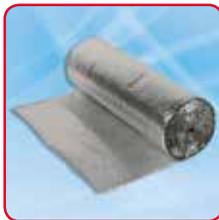
Maincor MLCP, PE-RT/AL/PE-RT, overlap welded aluminium Multi-Layer 100% barrier Composite Pipe. Available in 16mm coils.

Mainfoil Clips



Used in conjunction with Mainfoil, the Mainfoil Clips are designed to straddle a standard 50mm joist at 400mm centres.

Mainfoil Insulation



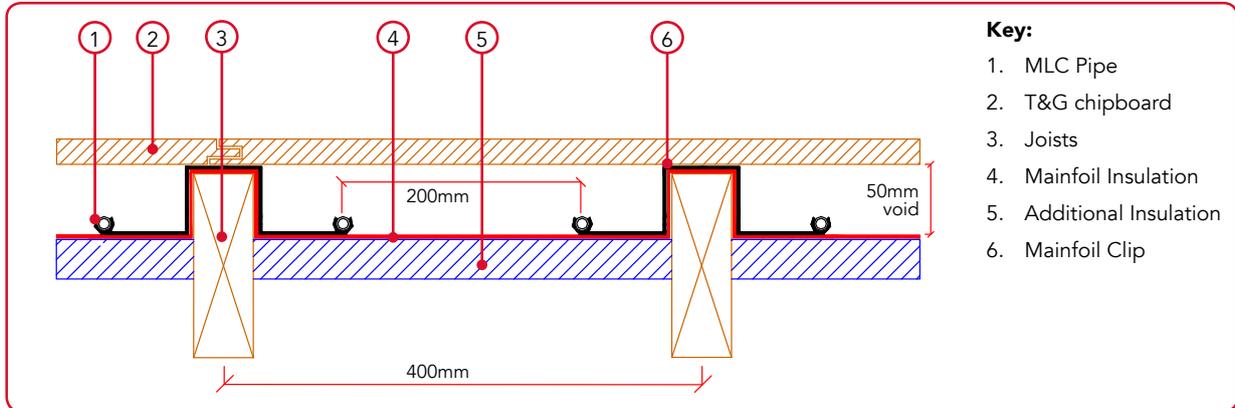
Designed for use with intermediate timber floor constructions, Mainfoil has high insulating and reflective properties. The foil increases the thermal efficiency of the system and allows installation to be carried out between joists. (One 30m² roll = 20m² UFH coverage).



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Technical Details



The floor section above shows the Mainfoil UFH System. The system is designed in a way that creates a heated air void and it utilises the reflective finish of the Mainfoil to reflect the radiant heat back up to the underside of the floor. One of the primary components of the system is the Mainfoil insulation (shown in red for clarity) which is an aluminium faced multi layer insulation. The insulation laps up and over the joists and creates the sealed air void in which the UFH pipes are situated. The UFH pipework is supported by the Mainfoil clips which keep the pipe in position at 200mm centres. The clips themselves are 50mm wide and fit snugly over the Mainfoil and joists. This system is designed for joists at 400mm centres although other centres can be catered for if the joists are cross battened. It is possible to achieve an output of 70W/m² with this system.

Insulation Requirements

Ground floor insulation is to comply with Part L of the Building Regulations. Either rigid PIR/PUR insulation boards such as Celotex or Kingspan can be used below the level of the Mainfoil Insulation. Alternatively a mineral fibre insulation can be used. Since this system relies on heating the air void

created by the Mainfoil it is essential that there is no air movement below the level of the floor. For this reason it is not recommend that this system is used on ground floor installations where there are ventilated voids.

The Mainfoil Insulation

- Mainfoil is a multi-layer foil laminate, coated with polyethylene to provide a corrosion resistant insulation system.
- Mainfoil is a high-performance material which acts creating a low emissivity air space below the floor, thus reflecting the heat back.
- Mainfoil can be applied to enhance 'U' values in new build or refurbished building projects to meet and exceed current Building Regulations.
- Mainfoil is certified by the BRE.
- Mainfoil offers a thermal resistance of 1.45m²K/W which includes the air space.

One 30m² roll of Mainfoil will be sufficient to cover a 20m² floor area. Roll dimensions: 1.2m x 25m x 4mm

Installation Overview

When installing underfloor heating systems ensure that all relevant health and safety legislation and local site regulations are fully adhered to at all times.



1. Fit the Mainfoil to the top of the joists and secure with Mainfoil clips at 200mm centres.



2. Roll-out the MLCP pipe into the required pattern and secure on the Mainfoil clips.