

**Dry Timber Constructions**

**Introduction**

Underfloor Heating can be used successfully with almost all forms of timber floor but achieving success requires specialist knowledge. It is very easy to install the wrong sort of UFH system, which can very quickly damage an expensive hardwood floor. By comparison, installing the right form of UFH can be the very best way of looking after a timber floor throughout its life. OSMA Underfloor Heating has this knowledge plus long experience and it is the only company approved by English Heritage to provide UFH systems for Grade 1 Listed timber floors.

Over the range of temperature change in a building between heating ON and heating OFF, timber does not change dimension to any significant extent. However, it does expand and contract as its moisture-content changes, which will

happen naturally as the seasons change. Wood floors should be laid at a moisture-content of 10-11%. When the heating system is turned ON or OFF, and the moisture-content of the floor changes, it is very important to ensure that the moisture-contents of the upper and lower surfaces of the timber remain the same. If one surface becomes drier than the other, the timber will either cup or crown.

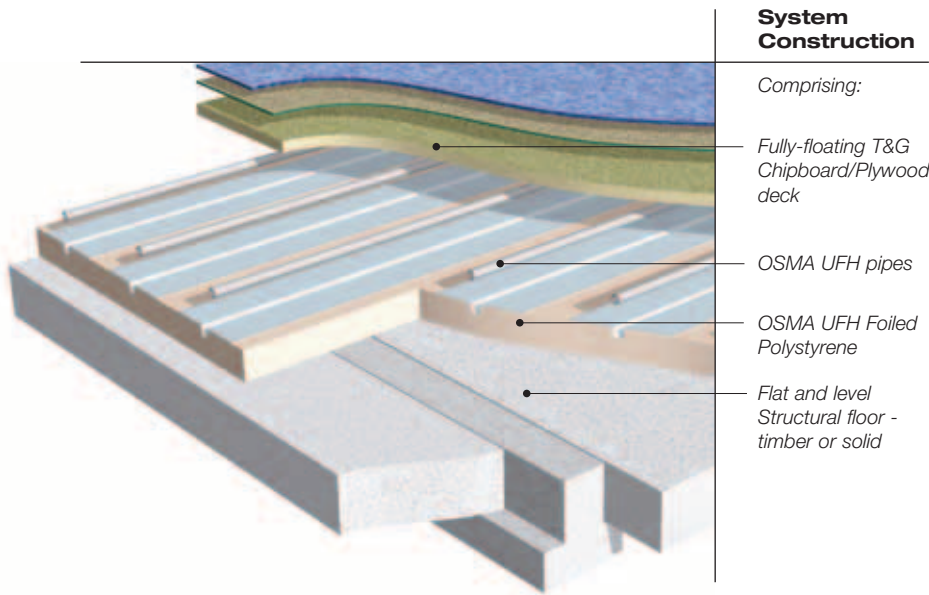
OSMA Underfloor Heating products are designed to conduct heat directly into the floor deck, rather than heat the air below the floor deck. Heating the air creates a heating system that provides much lower output than an OSMA system provides but it can also over-dry the underside of the timber floor.

OSMA products have also been designed to work within the floor construction holistically. They allow the floor deck to be glued to the tops of joists/battens so that the strength of the floor construction can be maximised while at the same time they minimise the risk of creating floors that squeak or tick.

OSMA is able to supply UFH systems that fit completely within all of the Part E RSD approved timber floor constructions.

Products that are manufactured from Polyfoam extruded polystyrene are available in different thicknesses, to suit different floor U value requirements. OSMA Underfloor Heating has developed a range of products that can be easily installed into timber constructions, including acoustic separating floors, that provide the user with the assured performance necessary for dry timber constructions.

**Foiled Polystyrene**



**System Construction**

- Comprising:*
- Fully-floating T&G Chipboard/Plywood deck
  - OSMA UFH pipes
  - OSMA UFH Foiled Polystyrene
  - Flat and level Structural floor - timber or solid

**System Features**

- No need to buy and install routed insulation and plates separately, and much less risk of plates being damaged and coming loose on site.
- The panels are easy to trim to size.
- There is no 'ticking' of plates during warm up and cool down, which can occur with thick separate aluminium plates.
- Forming the panels from high compressive – strength extruded polystyrene avoids the need for fitting edge or corner battens.

OSMA Foiled Polystyrene Heating Panels for fully floating floors, are an assembly of extruded polystyrene insulation, aluminium diffusers and polythene film.

Pipe channels are cut into the upper surface of each panel and fitted with an

aluminium diffuser. A polythene film is fitted over the whole surface. This seals the diffuser to the polystyrene, minimises 'ticking' as the panel warms and protects the pipe channel from dirt ingress during installation.