

THERMAL SURFACES

Surface Heating & Cooling Specialists

SOLID FLOORS

STRUCTURAL CONCRETE FLOOR





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Thermal Surfaces underfloor heating/cooling systems can be incorporated in to structural concrete floors.

Typically a structural concrete floor construction consists of a base of compacted hard core that is blinded flat with sand. A damp proof membrane is then laid to cover the compacted hard core. Perimeter/edge insulation is then installed to all walls and elevations projected through the concrete floor. The floor is then covered with a layer of thermal floor insulation in accordance with building regulations. The floor insulation is then covered with a polythene vapour barrier which is lapped up the walls and elevations projecting through the concrete floor. Thermal Surfaces underfloor heating/cooling pipe-work is then fixed with pipe ties to an A142 wire grid reinforcement mesh laid end to end (not overlapped) on top of the vapour barrier which will be at the base of the structural concrete floor. Additional reinforcement mesh can be installed at mid-level in the concrete floor to increase the strength of the structural concrete floor for heavy loads. The types of materials and method used to construct a structural concrete floor are normally selected by a structural engineer or architect to suit the constructional requirements of the project and the loads that will be implied on the floor.

Typically structural concrete floor underfloor heating systems can provide heat outputs of up to 120 watts/m² dependant on flow water temperature to the underfloor heating pipe-work and the floor finish type.

The method of installing underfloor heating/cooling pipe-work to A142 wire grid reinforcement mesh can also be used at the base of a floor screed. However please note this method is not suitable for liquid screed.

Once the underfloor heating/cooling pipe-work has been installed, it is pressure tested to ensure it is mechanically sound before the concrete is installed. The concrete is then allowed to dry and cure on the recommendations of the concrete installer/manufacture. Once the concrete floor is sufficiently dry and cured the floor finish can be installed.

SOLID FLOORS - FLOOR SECTION STRUCTURAL CONCRETE FLOOR

