

SCREED UNDERFLOOR HEATING SPECIFICATIONS

Screed floors with warm water heating pipes in them have been used in Europe and the USA in new and existing buildings for decades. The advantages are:

- Faster heat up and cool down times
- Less energy consumption due to less mass
- More complete insulation ability
- Can be installed on top of new or existing wood floor

NOT STRUCTURAL

The screed floor covering is made up of high density insulation, Multitubo heating pipe and concrete based screed. This is installed on the concrete construction floor slab and is **not** a structural part of the building.

The screed floor covering can be installed after the construction slab is complete on a new build or at any stage during the project (often once the framing is complete) as the process is the same as when retro fitting an existing building.

INSULATION

The insulation is 30-40mm Goldfoam (extruded polystyrene) or polyurethane insulation that is glued to the construction floor slab. (The moisture membrane is installed as typical below the construction floor slab.)

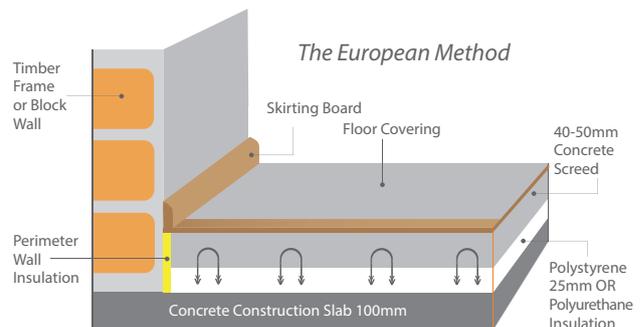
Edge insulation is required to minimise heat loss from the screed edge and provide for expansion as the floor warms and cools. This can be in the form of 10mm pynex board that has some compressibility but also aids the concrete placer as a height reference. This is set to a height above the insulation of 50mm.

PIPES

The best results come from Multitubo 16mm composite pipe with aluminium oxygen barrier, as supplied by Central Heating New Zealand. The flexible nature of the pipe maximises the installation ease and system performance.

Pipes are to be laid in bifolar (spiral reverse) pattern on the insulation and clipped down.

Pipe spacing and laying plan to be as per the heating design



supplied by Central Heating New Zealand, with edge distance from walls and joinery of 200mm.

- Pipes to be pressure tested to 6 bar. Pressure to be left on for the duration of the screed installation.

SCREED MIX FOR UNDERFLOOR HEATING APPLICATION

Screed floors require a high level of input from all involved with them due to unfamiliarity in the NZ market.

Designers and builders need to discuss their requirements with concrete suppliers to achieve the desired result.

Concrete placers need to be aware of practical issues of laying screeds within constructed buildings.

Companies that specialise in screed mixtures such as Firth and Allied will be able to assist in the design and supply of the screed.

EXPANSION JOINTS

All screeds expand and contract to some degree so allowance has to be made for this. The perimeter insulation fitted allows for some of this however large areas will need to have expansion joints or crack inducers in the screed itself to allow for movement and minimise screed cracking.