

This technique is preferred by many builders. A concrete sub-base is poured and the construction of the house may then continue right up to second fix before the pipes need to be installed. **100mm** minimum **high density** extruded polystyrene insulation is used. The pipes are attached to the insulation and a minimum 60mm concrete screed is poured around the pipes to give at least 40mm cover over the pipes. This gives good thermal conductivity with a good response time for the end user.

Liquid screeds provide an excellent self-levelled finish, and are recommended over a conventional concrete screed. If using a pouring screed, a waterproof membrane must be installed above the insulation prior to installation of the floor pipes. If a membrane is not used, the screed will penetrate the gaps and float the insulation. The thickness of screed may be reduced to 55mm, subject to application.

IMPORTANT: We do not recommend the use of lightweight foil-faced insulation such as Kingspan or Celotex as the core structure is not strong enough to hold the insulation clips. Celotex do make an insulation board with a denser core which is suitable for underfloor heating, but is often mistakenly substituted with wall or roof insulation that does not hold the clips. We recommend using a minimum of 100mm <u>high-density</u> flooring grade rigid insulation a product such as Dow Floormate (www.floormate-online.co.uk), Polyfoam Floorboard, Cellecta Hexatherm Xfloor, or similar. Insulation must have a minimum compressive strength of 200 kPa.

Beam and block construction may be used in place of a structural concrete floor slab.



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