



FUSIOTHERM PIPE INSTALLATION PROCEDURES CHECK LIST FOR INSTALLERS AND CERTIFIERS

Concrete, plaster and solid walls

Fusiotherm PPR-80 manufactured by aquatherm GmbH offers us special features for concealed installations. Fusiotherm® pipes and fittings manufactured from Fusiolen PP-R can be installed directly into concrete floors, walls, plaster and solid block work. The comprehensive strain and stress arising from a temperature dependant linear expansion is not critical as they are absorbed through the material. It is however, important to consider the following procedures and guidelines.

In Slabs and Footings

- It is not necessary to sleeve hot or cold pipe work when installed directly in the slab or block work apart from in expansion joints and penetrations, which are covered in the text.
- It is recommended hot water ring mains be insulated when installing in concrete floors. Thermal expansion consideration is not necessary, as the material will absorb the stress within the installation material.
- Ensure all pipe work is installed below the minimum concrete topping requirements of the building code and/or local authority.
- Where possible, we recommend the installation of pipe work underneath the steel mesh. This keeps the pipe work deep in the concrete slab, reducing risk of dynabolts and saw cut penetrations. Secure pipe work with cable ties of plastic or steel to reinforcing chairs and mesh where applicable, is acceptable practice.
- When installing without mesh on to Polythene or polystyrene, consideration must be given to securing the pipe work from floating or lifting.
- All pipe work passing through expansion joints in concrete slabs, walls, or block walls, must be sleeved with an impermeable flexible plastic material of no less than 6mm in thickness and must extend a minimum of 200mm each side of the expansion joint.

Under Concrete Slabs or Floors

- Fusiotherm® pipes shall be laid in a narrow trench of sand or fine-grain soil and compacted in a manner that will not damage the pipe. We recommend a minimum distance of 75mm between the pipe and the underside of the floor. All pipes shall be at right angles concrete floor.
- Any piping that penetrates the slab shall be at right angles to the surface of the slab and shall be lagged with an impermeable, flexible plastic material of not less than 6mm thickness for the full depth of slab penetration as per clause 2.13.3 AS/NZS 3500.5.2.000.
- We confirm for the above installations aquatherm GmbH takes over a 10-year product liability for the Fusiotherm® system, in case damages should occur with the system during that time which is evidently to be explained by material or fabrication error. All installations must be in accordance with aquatherm installation principles and by a certified installer.
- In addition, aquatherm GmbH confirms that the lifetime of the system is 50 years and longer for the above installations, according to the table attached to this letter as per page 1.5 and 1.6 of our technical manual permissible working pressures.

Underfloor Heating Considerations

- If underfloor heating is to be installed in the concrete slab, it is recommended that your cold water pipes be installed separately in the sub floor. Note: see under concrete slabs or floors installation procedures. However, insulating cold pipes and installing in the concrete slab through corridors which are separate and defined areas is also acceptable practice.

Liaise with your local building authority or certifier for local authority procedures.
Contact our Technical Department for any installation procedure enquires.