

The PEXATHERM Underfloor Heating Specifications

Pexatherm underfloor heating wet system with high efficiency gas or oil boiler with zoned temperature control.

The Pexatherm design

The Pexatherm underfloor heating system complies with the Current Building Regulation's Water Byelaws and the design standards is based on the requirements of the BS EN 1264. The PEXc pipe, floor fixings and floor insulation are produced under "ISO" 9000.

The Pexatherm underfloor heating system comprising of:

- Heating pipe coils, made from cross linked with electron beam polyethylene PEXc pipe in accordance with BS7291 Part 1 & 3 : 2002 (DIN 16892) and with oxygen diffusion barrier (DIN 4726).
- Or Heating pipes made of PEXc, Aluminium layer and PEX to DIN 4726.
- Pipe fixing based on Pexatherm:
A- The plastic slotted rails. B- or the clip-board sheets. C- or the hand or tool pushed staples. D- the black heat diffusion plates for timber floor construction.
- Wall mounted distribution manifold (in cabinet where indicated), made of brass with isolation ball valves, temperature gauge, lock shield valves, auto. Air vent and drain.
- The floor insulation shall be Pexatherm Multiboard laminates with vapour barrier and heat reflective foil (or floor grade insulation boards) to meet current building regulation. (Revised Part L 2002)
- The Pexatherm combined edge insulation and expansion joint strips at the perimeter.
- Screed 75 mm thick with Pexatherm additive if mixed on site.

The Pexatherm Controls

- Pexatherm 3 or 4-port mixer valve set and pump to reduce boiler water temperature in the floor to below 60 °C and floor surface temperature to less than 28 °C. at the manifold or near the boiler.
- Thermal electric actuator valves at the manifold and controlled by individual room thermostat or by programmable thermostat positioned on the wall in agreement with the client.
- The Multizoner I and II are recommended to wire the multiple room thermostats to the actuators at the manifold and to the UFH pump and the boiler.
- **Options:** A- MZ with outside sensor for extra efficiency. .B- For extra safety floor thermostat
- Independent programmable thermostat for radiator heating circuit controlling via the Multizoners. TRV controls at radiators and towel rails.
- High limit and adjustable thermostats at the unvented cylinder controlling via Multizoner I wiring centre.

Boiler and HW Cylinder

- High efficiency gas condensing boiler (such as IPPEC's QH30):
- Natural gas fuel with a min. of 90% SEDBUK rating efficiency.
- LPG fuel with a min. of 93% SEDBUK rating efficiency.
- Oil fuel with a min. of 85% SEDBUK rating efficiency.

Installation

- Pexatherm detailed design drawings and installation dossier to include pressure test certificate.
- All Pexatherm PEXc underfloor pipe work shall be laid in continuous lengths, with no joints, and connected to the manifolds with proper compression brass fittings.
- It is advisable to employ an IPPEC's registered installer for the underfloor heating installation.
- The Pexatherm distribution manifolds can be installed in a Pexatherm steel cabinet that has a removable access cover.
- Room Thermostat, pump and Multizoner are to be electrically wired by qualified electrician.
- The installer is to hydraulic pressure test of the Pexatherm underfloor pipe work up to 9 bar and before screeding, and then to issue a test certificate. These certificate to be witnessed and signed by the Architect or other independent qualified person.
- The Pexatherm cement additive shall be use in the screed to increases the heat conductivity of and to plasticise the screed, thus allowing it to completely envelop the underfloor pipes where ready mixed screed is not used. Slow screed drying and the avoidance shrinkage cracking is also to be addressed on site and dependant on prevailing weather.
- Flush the system clean with mains water and vent out all trapped air. Avoid risk of frost damage by adding approved anti-freeze to the system (polypropylene glycol).
- Apply heat to the Pexatherm underfloor heating system only 28 days after screeding.
- Increased the temperature in steps of 5 °C per week from starting ambient to final required temperature. The finished surface temperature is not to exceed a maximum of 28 °C.

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