



Underfloor Heating & Heat Pump at Jubilee House Bungalow

New build home with ASHP and Underfloor Heating

Thermo Floor have been working with a housing developer in Peterborough since 2005 – running the under floor heating contract for their luxury country homes. Totalling over 25 projects to date, the luxury homes set in idyllic rural town locations across Cambridgeshire, Lincolnshire, Northamptonshire and Rutland require the highest specification product and workmanship in the installation of both UFH and high-end control systems.

Jubilee House is a newly built large American Style ranch bungalow in Stamford. It has 4 bedrooms, snug and basement. The high spec building contains state of the art technology, and its owners chose to use the renewable energy generated from an ASHP to provide hot water and heating to the underfloor heating system.

Thermo-Floor designed and installed the ASHP, bespoke UFH system plus floor screed. The underfloor heating system was made to a bespoke design to enable it to run solely from the ASHP- Recognising the lower temperatures that a heat pump generates compared to a traditional boiler.

The UFH system was a within screed system. The screed was a 65mm 4:1 sand and cement

Facts and Figures

Building

- Floor area : 240 m²
- Insulation: 0.022 W/m.k
- Floor insulation: 240 m²

Source of energy

- 16Kw DHP-AQ ASHP

Climate system

- Underfloor heating
- Active heating up to 50°C flow

Thermo-Floor system

- Full service project execution
- LTS-N manifolds for
- Central control touchpad for each zone and room thermostats to each zone
- 300l Hot water cylinder
- 200l buffer tank
- 300l Hot water cylinder
- 200l buffer tank

screed with fibres.

The heat pump selected was a Danfoss 16Kw DHP-AQ with a 300l hot water cylinder and a 200l buffer cylinder.

Thermo-Floor also fitted the hot water system with a secondary return pump which enables the home owner to have instant hot water during peak time of the day by means of a hot water circulation pump with an integral timer.

The reason Danfoss ASHPs were selected was because of their reliability and excellent performance. Danfoss DHP-AQ heat pumps are also one of the quietest ASHPs on the market.

This is a large American Style ranch bungalow in Stamford. It has 4 bedrooms, snug and basement. Thermo-Floor was contacted to install an UFH system, floor screed as well as an ASHP. The underfloor heating was design with an ASHP in mind as the heat pump operates at lower temperatures than a traditional boiler, so the heating pipe was placed at closer centres to accommodate the lower water temperatures generated by the heat pump. The UFH system was a within screed system. The screed was a 65mm 4:1 sand and cement screed with fibres.

The heat pump selected was a Danfoss 16Kw DHP-AQ with a 300l hot water cylinder and a 200l buffer cylinder. We also fitted the hot water system with a secondary return pump which enables the home owner to have instant hot water during peak time of the day by means of a hot water circulation pump with an integral timer. All the home owner need to do is set the timer for the times hot water is required such as early mornings and evenings. The reason Danfoss ASHPs were selected was because of their reliability and excellent performance. Danfoss DHP-AQ heat pumps are also one of the quietest ASHPs on the market.