

# New-build home is first to use cutting-edge Ecodan QUHZ



Leicestershire



Detached



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A new-build home in Leicestershire is demonstrating how it is possible to build a highly efficient property that provides a warm, comfortable environment and uses existing technologies that are suitable to be used with common building techniques.

Keyplan Development Ltd created a spacious 3-bedroom, detached home that exceeds current UK building standards, paying particular attention to high levels of insulation and air tightness, making it possible to use a PV system, mechanical heat recovery ventilation alongside an heat pump.

With the homes heating energy requirement being lower than the hot water energy requirement, the family-sized home has two bathrooms and an en-suite, therefore, any heating system installed must be able to cope with a relatively high demand of hot water production.



The solution

Given the relatively unique requirements of this home, a heat pump that excels in delivering hot water efficiently would be best suited and is why an Ecodan QUHZ air source heat pump was chosen.

Therefore, this small 4kW capacity system is suited to this home that has a low space heating demand and can generate hot water in a reasonable time period without any loss in comfort. In addition to this the heat pump will help achieve exceptional energy efficiency, lowering the running costs compared to traditional heating systems.

The Ecodan QUHZ system is MCS-Approved, straightforward to install and is capable of delivering high temperature hot water of 70°C to a packaged 200 litre thermal store. By storing water in a highly efficient thermal store, it is possible to receive instantaneous domestic hot water upon demand and allow the use of traditional radiators and pipe work associated with common boiler systems.

Additionally, this extremely compact and quiet solution means that placement of the outdoor unit has been very simple, is unobtrusive and easily meets planning requirements.

**“We time clock the hot water to come on at intervals to meet our needs. The heat pump runs at night and we are very impressed with how quiet it is.”** Says Jon Fox, the houseowner.

Summary:

- New build ultra-low carbon solution located in a residential area
- Renewable heating via underfloor heating and radiators
- Unit delivers high temperature water at 70°C to a 200 litre thermal store



Product Overview:



4kW



200L Thermal Store



PV



Radiators



Underfloor



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Note: The fuse rating is for guidance only. Please refer to the relevant databook for detailed specification. It is the responsibility of a qualified electrician/electrical engineer to select the correct cable size and fuse rating based on current regulation and site specific conditions. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a fluorinated greenhouse gas, R410A (GWP:2088), R32 (GWP:675), R407C (GWP:1774), R134a (GWP:1430), R513A (GWP:631), R454B (GWP:466), R1234ze (GWP:7) or R1234yf (GWP-4). \*These GWP values are based on Regulation (EU) No 517/2014 from IPCC 4th edition. In case of Regulation (EU) No.626/2011 from IPCC 3rd edition, these are as follows. R410A (GWP:1975), R32 (GWP:550), R407C (GWP:1650) or R134a (GWP:1300).

