DiscreteHeat™
company limited

Solar Hot Water - PV Powered

"Free hot water?..
...Yes Please!"

· simple · efficient · clean ·

Made in Britain

ThermaTwin
Let the sun do *all* the work

What is ThermaTwin?

ThermaTwin is a unique flat plate solar thermal collector, which uses the power of the sun to heat the water and power the pump and controls. As a result the system is completely 'off-grid', and maximises the total energy available to provide the domestic hot water for the home whilst reducing the carbon consumed during operation to effectively zero. Manufactured in the UK and with more than 3,000 systems installed, ThermaTwin offers a robust, practical and affordable solution to your hot water and heating requirements.

Consider the following advantages:

✔ Solar 'twin' powered – uses solar thermal to heat the water and solar PV to drive the pump and controls; completely free hot water.

✔ Up to 120L of preheated water can be stored from one panel (usually enough for a 2-3 person property).

✔ Freeze tolerant – uses no Glycol or anti freeze minimising servicing and maintenance costs.

✔ Direct heating – fresh clean water is heated and pumped directly into the hot water storage tank, maximising efficiency.

✔ No Drain Back - simple anti-overheating mechanism so no complicated controls.

✔ Simple installation – usually half the time of a traditional solar thermal collector.

✔ Robust & reliable – twin-wall polycarbonate window is hail, football and vandal proof.

✔ 20 year Collector Warranty and 2 years on all indoor parts and components.

✔ Hygienic and clean – Fresh water constantly replaced and heated, avoiding infection.

✔ Light and manageable – Epoxy powder coated aluminium frame ensures an all in weight of under 30kg easing installation, reducing risk and minimising roof loading.

✔ Solar Key Marked to EN 12975 – Eligible for RHI, GreenDeal & SEAI Grants.

How is ThermaTwin Installed?

Usually installed in under a day, ThermaTwin provides a simple, maintenance free, robust and reliable system that can provide up to 100% of your hot water during the summer, 70% during Spring & Autumn and up to 30 % during the winter – absolutely free.

By eliminating the use of glycol or anti freeze, the ThermaTwin panel needs no refills or level checks, as it uses the direct mains water feed into the property. The panel uses a unique freeze-tolerant pipe that eliminates the need for drain back or other complicated control systems; fewer moving parts and controls means less maintenance & less to go wrong. This mains water is heated by the thermal panel and pumped directly into the hot water tank using the on-board PV panel as power for the pump, with minimal plumbing or disturbance. This makes it an ideal bolt-on to the 1,000,000's of homes in the UK running a non-pressurised system and header tank, as no heat exchanger is required, boosting overall system performance and reducing installed cost.

Thermal (Multi-fuel) Store

Where more than one heating source is installed, DiscreteHeat can provide a range of Multi-fuel Thermal stores, designed to take hot water from a variety of fuel sources as well as the ThermaTwin solar panel. These could be gas, oil, electric or biomass boilers or indeed a heat pump.

Combi Boilers

In smaller properties utilising a combi-boiler, DiscreteHeat can provide a compact pre-heat thermal store, especially suitable for combi's. Up to 120L of preheated water can be stored, (usually enough for a 2-3 person property), which reduces the amount of gas required to service the house to an absolute minimum. Thermal Stores are available to enable ThermaTwin systems to be installed in conjunction with pressurised sealed boilers.

Hard Water Areas

In areas of harder water (80 -180 ppm of calcium carbonate) we recommend the use of scale reducing crystals (Fernox LSP or similar). For very hard water areas (180ppm or above) DiscreteHeat recommends a water softener and/or a thermal store, which the company can supply. Please contact DiscreteHeat for further information.

.. completely 'off grid' to create free hot water in operation

CASE STUDY 1

Location: Bourneville Village Trust, Shenley, Birmingham.
Application: Social Housing
Product: 142 properties with 200 ThermaTwin type Solar Thermal Panels

The Bourneville Village is a desirable and environmentally friendly place to live, helped in part by their ThermaTwin solar thermal panels. ThermaTwin is a unique panel that uses no glycol or complicated drain back tanks and uses the power of the sun via an onboard PV panel to power the pump and controls.

"At BVT we have over 200 panels installed, for over 5 years and have had great reports from the tenants..the solar thermal panels have given us no problems, and have been practically maintenance free. We can easily see us using more of them on future projects"

Hitesh Champaneri, Development Manager, Bourneville Village Trust

CASE STUDY 2

Location: Falcon Housing
Application: Housing in 'off gas' area
Product: ThermaTwin panels with thermal store

"ThermaTwin solar panels were fitted in December 2009 and have worked as efficiently and without incident as the day they were first fitted. These are beyond a doubt the best investment we have made for our residents. Whilst ThermaTwin systems are cheaper than other solar panels, they do not lack in quality or performance and we, and our residents are thrilled with them. I would not hesitate to recommend ThermaTwin Solar panels to anyone and if fact have done so time and time again"

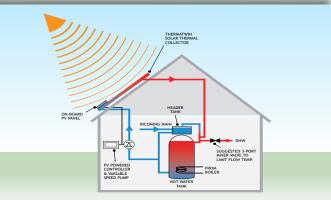*Samantha Southam, Chief Executive, Falcon Housing*
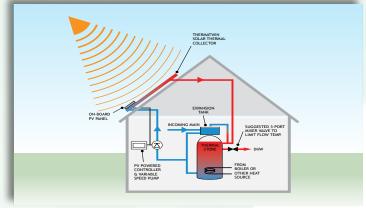
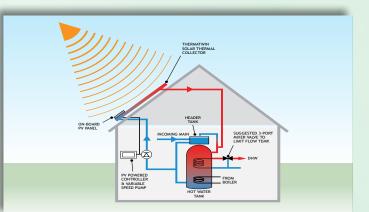.. maintenance free, robust and reliable

ThermaTwin is Solar Keymaked (PSK 008/13) and so is eligible for both RHPP (Renewable Heat Premium Payment - currently £300) and RHI (Remewable Heat Incentive, starting Spring 2014). ThermaTwin Solar Thermal panels are also eligible for Green Deal incentives and in Ireland are eligible for SEAL grants.
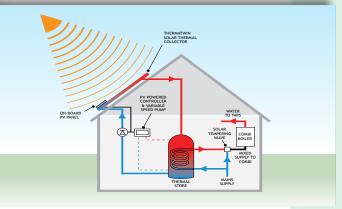
Typical Installation

Typical Direct Open Vented System

Typical ThermaTwin Thermal Store Mains Pressure System

Typical Thermal Store System

Typical Modulating Combi Preheat System

Diagrams are for illustration purposes only - see manual for positions and dimensions

Technical Specification

Model	Aperture M²	Length M	Width M	Height mm	Gross Area M²	Power Output *G = 1000 W/m² Tm-Ta: 0 K (W)	10 K (W)	30 K (W)	50 K (W)	70 K (W)	CO₂ Savings
1200/1201	2.82	2.46	1.263	75	3.11	1,653	1,539	1,295	1,025	731	254-268Kg

Power Output $*G = 1000$ W/m² Tm-Ta:

Stagnation Temp: 130°C — *Effective Thermal Capacity: 52.5 kJ (m²k)* — *Operating Pressure 150 kPa*

*Gtot = Annual total irradiation on collector plane - W/M² — Ta = Mean annual ambient air temperature - °C — Tm = Constant collector operating temperature (mean of in and out temperatures)- °C

How Many Panels?

		No. of Occupants					
		1	2	3	4	5	6
No. of Bathrooms	1						
	2						
	3						
	4						

Assumes predominately south facing roof at 45° pitch. For guidance only - contact your ThermaTwin installer for detailed advice.

Available from: