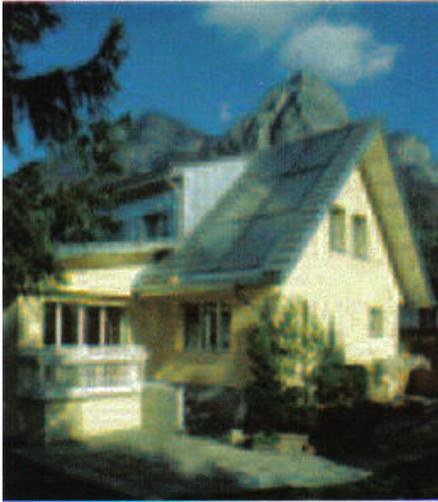


Heat-Tech Solutions supply and install Solarwerk solar panels.

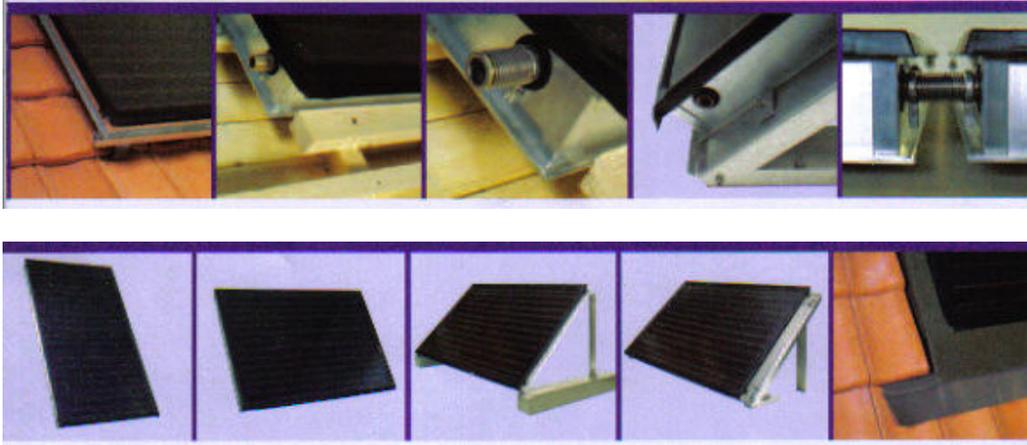
In Ireland 1 sq. metre of your roof receives the equivalent of 100 litres of oil in free solar energy each year.

A solar water heater produces hot water by transforming sunlight into heat through its solar panels; this heat is then stored in a large hot water cylinder for use when you need it.



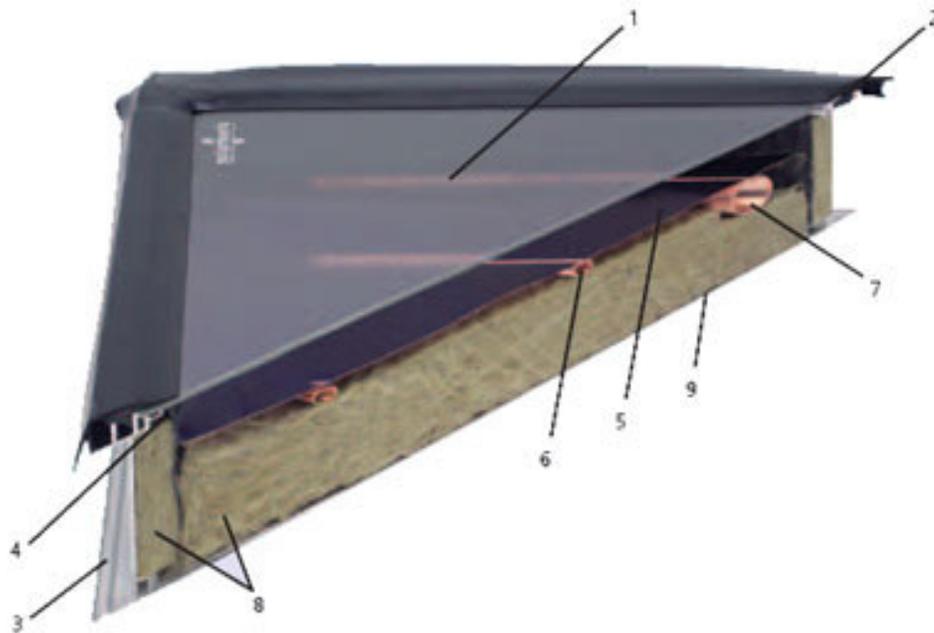
The solar controller system ensures the regulation and safety of the whole system.

A solar panel water heater not only converts direct sunlight but also indirect sunlight so it is producing hot water even on cloudy days, there will be less hot water in the wintertime but a back up heat source will boost the water temperature. Giving you domestic hot water at a fraction of the cost.



The Solarwerk standard collector can be used horizontally or vertically they can be fully integrated into the roof or surface mounted.

The length to width ratio of Solarwerk collectors corresponds to the 'golden section', this gives the collectors a very aesthetic appeal.



Components:

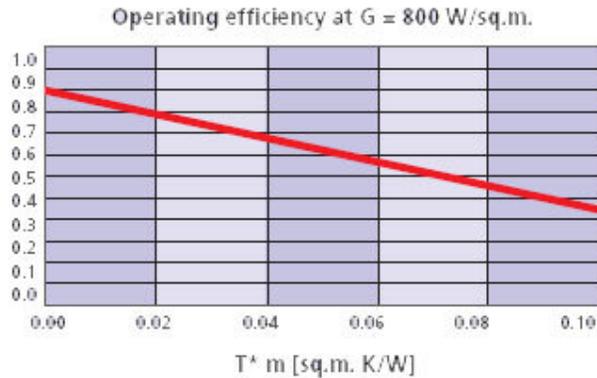
1. Hail proof and accessible solar glass.
2. A fully adhered EPDM seal with vulcanised corners.
3. Frames made from extruded sections of lightweight corrosion proof aluminium, with a continuous fastening groove around the perimeter.
4. An EPDM bedplate.
5. Copper absorbers coated with 'Sunselect'.
6. A fretwork of ultrasonically welded pipes made of copper.
7. Ultrasonically welded collecting pipes made of copper.
8. 'Flumroc' rock wool insulation to provide the best thermal insulation values and resists stationary temperatures.
9. A base panel made of aluminium.

Various Dimensions

Size	Length	Width	Height	Weight (empty)
2.60 sq. m	2,095 mm	1,400 mm	100 mm	50kg
2.25 sq. m	2,040 mm	1,240 mm	100 mm	44kg
1.65 sq. m	2,040 mm	935 mm	100 mm	36kg

Technology

- Regular flow through the individual absorbers irrespective of the panel size.
- No costly pipe work is required externally.
- The panel's hydraulic system of up to 18 sq. m. is adjustable without Tichelmann.
- 4 no. rapid action connections per collector.
- Very good yield values of more than 525 kWh / sq.m.
- Tested by the SPF Institute for Solar Technology in Switzerland.



The Solarwerk Drain back System

The drain-back system, which is very common on the continent, has a number of advantages over the pressurized system, which is common in Ireland and the UK:

- . At night, when there is no sun or in other very cold weather there is no water in the panel to freeze, so plain tap water can be used in the system.
- . No Chemical antifreeze is required, so there is no maintenance to check and maintain antifreeze protection for the system.
- . In very hot weather with no water draw –off (e.g. whilst away on summer holidays) the system is protected from boiling by draining back the water when the cylinder exceeds 80 degrees centigrade.
- . In the event of a power failure the system always fails safe, with water draining back out of the panel, where it will neither freeze nor boil.
- . Plain tap water is a better heat transfer medium than antifreeze, so carries a greater density of heat from the panel into the hot water cylinder.

The actual amount of energy saved depends on the household hot water usage, but is generally between 30 and 70% of the total hot water consumption. The financial savings will depend on the cost of fuel and efficiency of the existing boiler. Tests by the Netherlands building research organization TNO have shown that a single panel system should provide 4GJ [giga joules] per year or 1112kWh [kilo watt hours] under standard circumstances.

The more panels installed the higher the savings.

Recommendation

Heating and storing Domestic Hot Water with Solar Panels demands a high quality water cylinder. This cylinder must have the following specification included:

- High Pressure Twin Coil
- 3KW Immersion
- Be insulated to lose less than 1°C in 24 hours.

Your Solar panels will be plumbed into one coil of the cylinder while your main heat source will be plumbed into the second coil.