

Solar Thermal - Solar panel systems

System principals

Burdens Environmental solar panels are powered by light. It does not have to be direct sunshine - there is sufficient energy in a cloudy day for the panels to collect energy for your hot water.

When day light strikes the panel the light is absorbed into the panel and converted into heat. This heats up the heat transfer fluid in the copper heat transfer pipe. When the temperature in the panel is higher than the temperature in your hot water cylinder a digital controller activates the pump. The heat transfer fluid in the heat pipe pumps heat into your cylinder that heats up the water. When you have sufficient hot water in the cylinder the pump stops. If you draw water off (for example by running the bath), as the cold water enters the system the drop in cylinder temperature is sensed by the controller and it starts up the pump to bring the cylinder water temperature to the desired level.

We estimate that our collectors will produce around 70% of your hot water over a year. They will produce more in the summer when the days are long, and less in the winter - the 70% is an approximate overall figure based on average hot water usage.

We also estimate that in December, when the days are short, they will only make a small contribution to your hot water needs. However in summer, when the days are longer they will produce up to 93% or more of your hot water, all free and all produced in an environmentally friendly way.

At times when there is insufficient light to power the system (for example at night or on a rainy or foggy day in late December), the water is heated by your gas boiler or electrical immersion heater, in the traditional way. These will be the only times that you will be burning fossil fuel when heating water.

Households on average spend between 27% to 35% of their total energy costs on heating water. Panels, which act as a supplement to existing water heating arrangements, significantly reduce bills, and at the same time substantially reduce carbon dioxide emissions. This all contributes to helping you reduce your home, and family's carbon footprint (the amount of carbon being used on a yearly basis.)

Total solution

The Burdens Environmental package, which has been developed to deliver outstanding performance, extremely low maintenance and an impressively short pay-back period, offers the following benefits:

- 20 year warranty on panels.
- 35 year life expectancy.
- Installation adds value to any property.
- Full European Certification BS/EN 12975 Parts 1 & 2.
- Generating up to 70% of your hot water needs free!



The Burdens Environmental S Class collector - designed as a domestic solar panel capable of being linked up to three in series.

Burdens Environmental solar systems offer the flexibility of a wide range of fixings to ensure that most walls, roof type and gable ends are capable of supporting solar panels.

- Panels have high glycol fluid content leading to high efficiency.
- Constructed using robust safety glass and one piece metal back case.
- Saving up to 0.75 ton of carbon emissions per house per year.
- Hitting new government targets on energy saving classification when selling your house.
- Helping to save the planet from global warming.
- Making large savings on your ever increasing energy bills.
- Pay back on our system can be achieved in as little as six years.
- Boiler cycling reduced therefore increasing the life of your boiler.
- Panels will even work below 0°C

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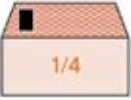
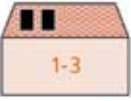



Selection guide

Selecting the correct kit for your property can often include long complex water calculations, however using Burdens Environmental's system selection guide, you can be assured that you are going to get a system that suits your property.

It is important that you chose the correct system for your property, in order to ensure a good investment and a realistic payback period. Many people believe oversizing the system will make it work better, however in reality this is not the case, and can often push the

payback period many more years down the line.

Sizing the system to the property and not your circumstances will also mean that when you come to sell your home it should add precious value to the sale.

No. Bedrooms in House	Cylinder/Boiler Type	Roof Type		Solar Kit Type Required
		On Roof	In Roof	
 1/4	Combi Boiler	Slate <input type="checkbox"/>	N/A	1 or 2 Panel Kit Suitable for a combi boiler system
		Tile <input type="checkbox"/>	Tile <input type="checkbox"/>	
 1-3		Slate <input type="checkbox"/>	Slate <input type="checkbox"/>	2 Panel Kit Suitable for 200 litre twin coil cylinder or retro fit
		Tile <input type="checkbox"/>	Tile <input type="checkbox"/>	
 4+		Slate <input type="checkbox"/>	Slate <input type="checkbox"/>	3 Panel Kit Suitable for 300 litre twin coil cylinder or retro fit
		Tile <input type="checkbox"/>	Tile <input type="checkbox"/>	

S Class collector

The Burdens Environmental S Class Panel is a world leading, vertically mounted flat plate collector. This panel has been constructed using top quality materials and manufacturing techniques which results in an unbeatable 20 year guarantee.

This guarantee offers any customer many benefits, peace of mind, real payback opportunities, as most panels on the market only have a 10 year guarantee or less. The S Class also has a much smaller carbon footprint thanks to its longevity of life. The panels are designed to have a 35 year life span.

The S Class Panel has been designed as a domestic solar panel, capable of being linked up to three in series. The panels can either be set on-roof or by using the Burdens Environmental flashing kit, in-roof.

M Class collector

The Burdens Environmental M Class Panel has been specifically designed to meet the needs of large industrial applications. It is suitable for both commercial buildings, and private applications, such as large swimming pool installations.

The M Class collector is suitable for both on-roof and in-roof installations. Also in the case of commercial buildings, wall mounting, flat roof installations, and metal roof mountings are also available.

M Class panels are also available as a horizontal variant, allowing installation on roofs where space is a premium.

Thanks to the flexibility of the M-Class panel there is a solution to any scenario. For all your specification needs, please contact our team at Burdens Environmental.

'Econ' range

Introducing Burdens Environmental's new Econ Range, further proving Burden's commitment to the environment, and showing the marketplace that solar needn't break the bank. This makes the Econ Panel perfect for jobs where budget is a factor without compromising on quality, such as Affordable Housing Schemes.

Unlike some of the more expensive panels on the market we are able to back this product with an 8 year guarantee. Like the S Class Collector the panel is mounted on a roof using the same roof fixing options.

Burdens Environmental's Econ System is supplied using exactly the same equipment as the S Class kits.

The Econ Range is capable of being installed up to 5 in series in a single system, making the panel suitable for both small domestic, and some swimming pool applications.

