




Optimmersion®

Free hot water from your Solar PV system.

Free hot water

Your surplus solar power is used to heat water in your existing immersion tank.

Save money

Drastically reduce your hot water bills as excess electricity is diverted to the immersion heater.

Maximise return on investment

Estimated payback time is from three years for busy households.

Automatic solution

The intelligent controller gets to work whether or not you are in the house, meaning you automatically get free hot water.

Increase efficiency

All of your 'home-grown' electricity is used, minimising what you pay your electricity supplier.

Total control

Ability to change controller settings and monitor your home's electricity activity to view real results.



Whenever surplus electricity is available, it is diverted to heat your water.

The intelligent proportional controller can be added to any solar power installation and immersion heating system.

Optimmersion®, saving you money on unnecessary energy.

Optimmersion® is a complete solution

Optimmersion® measures how much power is flowing through your electricity meter and in which direction. Only when you are generating a surplus does it divert power to the immersion heater, always adjusting the exact level so as to minimise the amount going back to the grid.

Optimmersion® responds immediately to changes in how much electricity you use in your house and to changes in the sunlight; so you can turn electric appliances on and off in your house without worrying about it interfering with Optimmersion®.

When you turn the kettle on, Optimmersion® makes the exact adjustment to ensure that only the surplus power goes into your tank. In the same way, when the sun goes behind a cloud, the immersion heater power is reduced by just the right amount so you never use too much.

Optimmersion® is entirely automatic. Once you turn it on, it does the all the work on its own. For full peace of mind you can monitor its activity using the integrated display and check its effectiveness by accessing your Wattson Anywhere account on your computer.

By installing an Optimmersion® system in your solar powered home, you will quickly notice its influence on your usual hot water bills. You will always benefit from using your 'home grown' electricity to provide hot water for your household, maximising the use of your Solar PV system.



Saving money is so easy

“ Since we installed our Optimmersion® we can't believe how much we have already saved!

In November alone we saved £20 in oil bills because we used our own generated surplus electricity to heat our water tank.

We were able to check the figures using our Wattson. ”

Jill and Tony live in Cambridge. They have a 4kWp solar PV system on their roof and have an oil fired boiler for central heating and hot water.

Since installing their Optimmersion® system in November 2012, they have already noticed that they are using less oil and they fully expect to switch off their boiler from April until October.

Optimmersion® is an intelligent proportional controller



The Optimmersion® system ensures all of Jill and Tony's generated electricity is used in the house with the surplus diverted to their immersion tank.

To view Jill and Tony's live data visit our website www.wattsonsolar.com/uk/aboutus/optimmersion



Jill and Tony's usage and generation data before they installed their Optimmersion® system. See how most of their generated electricity is exported rather than used.

Diverts surplus energy to heat water.

Diverts only the surplus energy and no more.

The bright and attractive colour display also shows you at a glance what you are saving and what you are using.

Shows how much power is currently being diverted to the immersion heater.

Shows daily total of energy saved.

Suitable for installation at the same time as the Solar PV system or afterwards.

Uses existing immersion heater.

Can control power to any resistive load up to 3kW.

Simple power monitoring using AC current clamp.

Automatic low cost electricity boost setting (e.g. Economy 7).

Manual booster control.

UK manufactured.

3 year product warranty.

Part of the Wattson eco-system.

Standalone product for non-Wattson users.

Can divert energy to more than one heating element.

Enhanced flexibility with a choice of product versions to suit your home's wiring set up.

In the wireless version, the Wattson transmitter is integrated into the controller.

Technical specifications

FEATURES	OPTIMMERSION
Power consumption of controller	2 watts
Transfer efficiency of throttle	98 %
Max. load current surge (amp)	Half a cycle 250A Non-repetitive 25A
Max. load constant surge (amp)	17 A
Mains frequency tolerance 50Hz	+/- 1Hz
Operating temperature	65 °C operational
Maximum power dissipation at 3kW output	13 watts
Internal fuse	20 Amps 1 ¹ / ₄ ceramic
Packaged weight	3.4 kg
Packaged dimensions (cm)	L:34 W:27 H:19

Optimmersion® is available in four versions:

- Optimmersion Simple
OIMM-BAEN-UK
- Optimmersion Wireless
OIMM-WIEN-UK
- Optimmersion Wired
OIMM-SDEN-UK
- Optismart Hot Water
OSHW-MDEN-UK

Note that the Optimmersion® power throttle changes the power supply to the immersion heating element, so no other electrical device should be connected on the same electrical circuit between the throttle and the heating element.

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Other Products

Wattson Solar Plus

Shows how much of your generated electricity you are already using and how much more power you could be using for free.

You can also use its Holmes or Anywhere software to keep track of and analyse electricity usage and generation in your home.



Optiplug

Optiplug is an intelligent socket which switches on your appliances when you have spare electricity.

The smart socket learns and understands how much electricity is used by the appliances that are plugged into it.

Optiplug then only switches on when enough electricity is available for those appliances, switching off when electricity is no longer free. Its built-in intelligence minimises the amount of switching that takes place when two or more Optiplugs are in use.



Optimmersion[®] versions

Optimmersion Wired is the standard Optimmersion, with colour display showing generation, usage, net usage and power diverted to the immersion heater. It has an option to make use of off-peak electricity overnight to ensure water is hot all day. It requires a control wire between the controller and the power throttle.

Optimmersion Simple focuses solely on providing free hot water. It has fewer control options and only measures the net power being exported/imported as this is all it needs for controlling the immersion heater. It requires a control wire between the controller and the power throttle.

Optimmersion Wireless greatly simplifies and standardises installation by adding a wireless link between the controller and the power throttle. The sensing and control is at the consumer unit and the power throttle can be placed where it is convenient. A Wattson transmitter is built-in for use with a Wattson display and/or Optiplug(s).

Share the benefits of Optimmersion Wireless and Wattson Solar Plus all-in-one with **Optismart Hot Water**.

	Optimmersion Simple OIMM-BAEN-UK SRP £299.99	Optimmersion Wired OIMM-SDEN-UK SRP £354.11	Optimmersion Wireless OIMM-WIEN-UK SRP £405.74	Optismart Hot Water OSHW-MDEN-UK SRP £498.73
Modular design	✓	✓	✓	✓
Number of sensors included	1, directional	2	2	2
Installation kit	✓	✓	✓	✓
Installer and user guides	✓	✓	✓	✓
Colour display	✓	✓	✓	✓
3 switch settings	✓	✓	✓	✓
Manual override	✓	✓	✓	✓
1 hour boost	✓	✓	✓	✓
Off peak boost		✓	✓	✓
Displays energy usage		✓	✓	✓
Displays energy generation		✓	✓	✓
Displays net energy usage	✓	✓	✓	✓
Displays total energy generated		✓	✓	✓
Displays energy diverted to immersion	✓	✓	✓	✓
Displays current function status		✓	✓	✓
Displays time		✓	✓	✓
Max no. parallel wired power throttles	1	5	5	5
Max no. wireless controlled power throttles			5	5
Wattson transmitter incorporated			✓	✓
Wattson display included				✓
Wattson shows diverted power				✓
Wattson shows own energy used (saved)				✓

Additional power throttles available:

Wired Power Throttle OIMM-PSEN-UK

Wireless Power Throttle OIMM-PWEN-UK

CE EN 61326-1, EN 61000-3-2
EN 61000-3-3, EN 60335-1:2012



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More info: www.energeno.com/uk/aboutus/optimmersion