

ENVIROSON<sup>®</sup> Active Solar System

# AS System



 **envirosun**



Australian  
Standard

AS2712: 2007  
Lic. SMKP20021  
SAI Global



AS3498 Lic. WMKA21707  
SAI Global

## ENVIROSUN – SMARTER SOLAR SOLUTIONS

Everyone knows the benefits of solar hot water – by harnessing the sun's energy and converting it into hot water, it reduces your household's greenhouse gas emissions, saves you money on energy bills and adds value to your home.

Envirosun takes these benefits one step further, with a real commitment to the environment, and to you.

The Envirosun story is one that encompasses over a quarter of a century of industry experience and innovation. Supplying solar hot water systems is all we do, and we do it well. Our manufacturing philosophy is different. We're assemblers, not fabricators shackled by a commitment to an outdated manufacturing plant.

What we do is scour the world for the very best solar water heating components – tanks, collectors and controls – from some of the world's largest and most advanced production houses, allowing us to keep one step ahead as technology progresses. Through our process of choosing the best components that work and fit together in the best way, we are always at the cutting edge of the industry, providing superior, environmentally responsible solar hot water systems.

What this means for you is a product that is more reliable and more durable; one that works better and is more economical to run.



# AS

## ACTIVE SOLAR SYSTEMS

### Benefits of the AS system

1. High performance active solar hot water system
2. Roof-installed solar collectors and ground-mounted tank
3. Tank can be located indoors or out
4. Greater flexibility, improved aesthetics and higher capacity
5. Latest collector technology
6. Maximum solar absorption and storage in all areas



Envirosun's Active Solar (AS) range of pumped or active solar hot water systems offer greater flexibility, improved aesthetics and higher capacity, along with maximum efficiency and reduced energy costs.

Only the solar collectors are installed on the roof, harnessing energy from the sun and transferring it to a ground-mounted storage tank. The tank can be sited indoors or out, in any convenient or out-of-the-way location.

The operating principle is simple - when the solar collectors are able to add heat into the storage tank, a small pump is switched on to circulate hot water from the collectors and replace it with cool water from the tank. Once the tank is full of hot water, the pump is switched off, but ready for the next cycle.

While pumped systems have been around for many years, modern electronics and materials have brought improvements in both function and reliability. Today's Envirosun AS systems adopt many of these technological advances and blend them with our collector technology to create a range of high-performance active solar hot water systems that maximise solar absorption and storage, whether you live in a low or high radiation area.

# THE CONTROLLER

The AS System circulating pump is controlled by an electronic microprocessor that is located on the side of the storage tank and adjacent to the pump. The controller uses two temperature sensors to compare the temperature of the solar collectors to that of the storage tank.

When the collectors are 10°C hotter than the tank, the controller starts the pump and water begins to circulate between the tank and collectors. Circulation continues until the temperature difference between the tank and collectors falls to 1°C and the pump is then stopped.

The circulating pump draws negligible electrical energy and the controller ensures it operates when solar gain is available.

The controller also fulfils a number of other functions: it protects the storage tank from over-heating, it cools the collectors if they approach excessively high temperatures; and it reduces the risk of the collectors freezing under winter frost conditions\*.

\* Not recommended for severe frost-prone areas.



## COMPLIANCE AND STC CREDITS

Envirosun is fully compliant to all relevant industry standards, and independently accredited by the Australian Government Clean Energy Regulator (CER). Envirosun solar hot water systems appear on the CER Register and create Renewable Energy Certificates, which form the basis for determining Small-scale Technology Certificates (STCs). These credits are available as financial support to purchasers – the greater the number of STCs, the greater the level of support.

### WHAT ARE SMALL-SCALE TECHNOLOGY CERTIFICATES?

The Australian Government Clean Energy Regulator publishes a Register of solar water heaters for which Small-scale Technology Certificates (STCs) may be created under the provisions of the Renewable Energy (Electricity) Act 2000.

The number of STCs a particular water heater is entitled to create will depend on its installation date and geographic location. The Regulator has determined four zones for solar water heaters with each zone based on climate and solar radiation levels. Each zone has been defined on geographic location.

The number of STCs depends on the installation date and geographic location of the solar hot water heater. The map here shows the geographic location for each zone. The CER also provides the list of postcodes that lie in each zone.



## ENVIROSUN EXTENDED PRODUCT WARRANTY

Component	Up to 1 Year from Date of Installation	From 1 to 2 Years from Date of Installation	From 2 to 5 Years from Date of Installation	From 5 to 7 Years from Date of Installation
	Parts & Labour	Parts & Labour	Parts	25% Discount Off RRP on Parts
AS Tank (ground mounted)	✓	✓	✓	✓
Collector	✓	✓	✓	✓
PM-602	✓	✓		
Electrical Parts, Valves & Plumbing Accessories	✓			



## STANDARDSMARK LICENCE

SAI Global hereby grants:

### Energie Group Australia Pty Ltd

ABN 50 166 500 787

460 Victoria Road, Malaga, WA 6090, Australia

#### StandardsMark Licence

Manufactured to:

AS/NZS 2712:2007 - Solar and heat pump water heaters - Design and construction

\*The StandardsMark Licence is the right to use the STANDARDSMARK as shown below only in respect of the goods described and detailed in the Schedule which are produced by the Licensee or on behalf of the Licensee\* and which comply with the appropriate Standard referred to above as from time to time amended. The Licence is granted subject to the rules governing the use of the STANDARDSMARK and the Terms and Conditions of certification and licence. The Licensee covenants to comply with all the Rules and Terms and Conditions.

Certificate No:SMKP20021

Issued: 16 November 2017

Originally Certified: 4 July 2003

Expires: 3 July 2018

Current Certification: 16 November 2017

Nicole Grantham  
General Manager SAI Global Certification Services



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\* For details of manufacture, refer to the Licence

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SAI Global hereby grants:

### Energie Group Australia Pty Ltd

ABN 50 166 500 787

460 Victoria Road, Malaga, WA 6090, Australia

#### Watermark Certificate of Conformity - Level 1

Evaluated to:

AS 3496-2009 - Authorization requirements for plumbing products - Water heaters and hot-water storage tanks

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Certificate No:WIMKA21707

Issued: 8 December 2016

Originally Certified: 8 July 2010

Expires: 7 July 2020

Current Certification: 8 December 2016

Nicole Grantham  
General Manager SAI Global Certification Services



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Refer to [www.saiglobal.com](http://www.saiglobal.com) for the list of product models.



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# AS FACT SHEET

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# AS

ELECTRIC BOOSTED OPEN SYSTEMS								
	AS250/25e	AS250/40e	AS315/40e	AS315/50e	AS315/60e	AS400/40e	AS400/50e	AS400/60e
<b>CER Code</b>	AS250/25/0/E24/E25BC-DM	AS250/40/0/E24/E20BC-DM	AS315/40/0/E24/E25BC-DM	AS315/50/0/E24/E25BC-DM	AS315/60/0/E24/E20BC-DM	AS400/40/0/E24/E20BC-DM	AS400/50/0/E24/E25BC-DM	AS400/60/0/E24/E20BC-DM
<b>Tank</b>	VE250/E24/V-DM	VE250/E24/V-DM	VE315/E24/V-DM	VE315/E24/V-DM	VE315/E24/V-DM	VE400/E24/V-DM	VE400/E24/V-DM	VE400/E24/V-DM
<b>Collectors</b>	E25BC	E20BC	E20BC	E25BC	E20BC	E20BC	E25BC	E20BC
<b>Storage capacity</b>	259L	259L	321L	321L	321L	420L	420L	420L
<b>Mass empty</b>	123kg	155kg	176kg	185kg	208kg	143kg	158kg	229kg
<b>Mass full (on roof)</b>	46kg	75kg	75kg	90kg	112kg	75kg	90kg	112kg
<b>Mass full (on ground)</b>	340kg	340kg	422kg	422kg	422kg	544kg	544kg	544kg
<b>Footprint (on roof)</b>	1,413 x 2,050mm	2,270 x 2,050mm	2,270 x 2,050mm	2,740 x 2,050mm	3,362 x 2,050mm	2,270 x 2,050mm	2,740 x 2,050mm	3,362 x 2,050mm
<b>Footprint (on ground)</b>	782 x 617mm	870 x 705mm	870 x 705mm	870 x 705mm				
<b>Boost capacity</b>	167L	167L	187L	187L	187L	253L	253L	253L
<b>TANK</b>								
<b>Model</b>	VE250/E24/V-DM	VE250/E24/V-DM	VE315/E24/V-DM	VE315/E24/V-DM	VE315/E24/V-DM	VE400/E24/V-DM	VE400/E24/V-DM	VE400/E24/V-DM
<b>Mass empty</b>	72kg	72kg	93kg	93kg	93kg	115kg	115kg	115kg
<b>Mass full</b>	331kg	331kg	414kg	414kg	414kg	535kg	535kg	535kg
<b>Footprint</b>	620 x 620mm	705 x 705mm	705 x 705mm	705 x 705mm				
<b>Height</b>	1,445mm	1,445mm	1,765mm	1,765mm	1,765mm	1,705mm	1,705mm	1,705mm
<b>COLLECTORS</b>								
<b>Quantity</b>	1	2	2	2	3	2	2	3
<b>Model</b>	E25BC	E20BC	E20BC	E25BC	E20BC	E20BC	E25BC	E20BC
<b>Mass empty (each)</b>	41.0kg	34kg	34kg	41.0kg	34kg	34kg	41.0kg	34kg
<b>Mass full (each)</b>	43.0kg	35.7kg	35.7kg	43.0kg	35.7kg	35.7kg	43.0kg	35.7kg
<b>Footprint (each)</b>	1,235 x 2,000mm	1,000 x 2,000mm	1,000 x 2,000mm	1,235 x 2,000mm	1,000 x 2,000mm	1,000 x 2,000mm	1,235 x 2,000mm	1,000 x 2,000mm
<b>Height (each)</b>	82mm							
<b>ELECTRIC BOOSTER</b>								
<b>Rating</b>	2.4kW							
<b>SMALL-SCALE TECHNOLOGY CREDITS (STCs)</b>								
<b>Zone 1</b>	17	30	30	40	41	29	40	41
<b>Zone 2</b>	18	31	32	43	44	31	42	44
<b>Zone 3</b>	17	30	30	40	42	29	39	41
<b>Zone 4</b>	15	27	27	35	37	25	34	36
<b>GAS BOOSTED OPEN SYSTEMS</b>								
	AS250/25g	AS250/40g	AS315/40g	AS315/50g	AS315/60g	AS400/40g	AS400/50g	AS400/60g
<b>CER Code</b>	AS250/25/0/GD20/E25BC-DM	AS250/40/0/GD20/E20BC-DM	AS315/40/0/GR26/E20BC-DM	AS315/50/0/GR26/E25BC-DM	AS315/60/0/GR26/E20BC-DM	AS400/40/0/GR26/E20BC-DM	AS400/50/0/GR26/E25BC-DM	AS400/60/0/GR26/E20BC-DM
<b>Tank</b>	VE250/E24/V-DM	VE250/E24/V-DM	VE315/E24/V-DM	VE315/E24/V-DM	VE315/E24/V-DM	VE400/E24/V-DM	VE400/E24/V-DM	VE400/E24/V-DM
<b>Collectors</b>	E25BC	E20BC	E20BC	E25BC	E20BC	E20BC	E25BC	E20BC
<b>Storage capacity</b>	258L	258L	320L	320L	320L	420L	420L	420L
<b>Mass empty</b>	144kg	171kg	193kg	206kg	228kg	165kg	179kg	250kg
<b>Mass full (on roof, exc Booster)</b>	46kg	75kg	75kg	90kg	112kg	75kg	90kg	112kg
<b>Mass full (on ground, exc Booster)</b>	340kg	340kg	422kg	422kg	422kg	544kg	544kg	544kg
<b>Footprint (on roof)</b>	1,413 x 2,050mm	2,270 x 2,050mm	2,270 x 2,050mm	2,740 x 2,050mm	3,362 x 2,050mm	2,270 x 2,050mm	2,740 x 2,050mm	3,362 x 2,050mm
<b>Footprint (on ground)</b>	782 x 617mm	870 x 705mm	870 x 705mm	870 x 705mm				
<b>Boost rate</b>	20L/min	20L/min	26L/min	26L/min	26L/min	26L/min	26L/min	26L/min
<b>TANK</b>								
<b>Model</b>	VE250/E24/V-DM	VE250/E24/V-DM	VE315/E24/V-DM	VE315/E24/V-DM	VE315/E24/V-DM	VE400/E24/V-DM	VE400/E24/V-DM	VE400/E24/V-DM
<b>Mass empty</b>	72kg	72kg	93kg	93kg	93kg	115kg	115kg	115kg
<b>Mass full</b>	330kg	330kg	413kg	413kg	413kg	535kg	535kg	535kg
<b>Footprint</b>	620 x 620mm	705 x 705mm	705 x 705mm	705 x 705mm				
<b>Height</b>	1,445mm	1,445mm	1,765mm	1,765mm	1,765mm	1,705mm	1,705mm	1,705mm
<b>COLLECTORS</b>								
<b>Quantity</b>	1	2	2	2	3	2	2	3
<b>Model</b>	E25BC	E20BC	E20BC	E25BC	E20BC	E20BC	E25BC	E20BC
<b>Mass empty (each)</b>	41.0kg	34kg	34kg	41.0kg	34kg	34kg	41.0kg	34kg
<b>Mass full (each)</b>	43.0kg	35.7kg	35.7kg	43.0kg	35.7kg	35.7kg	43.0kg	35.7kg
<b>Footprint (each)</b>	1,235 x 2,000mm	1,000 x 2,000mm	1,000 x 2,000mm	1,235 x 2,000mm	1,000 x 2,000mm	1,000 x 2,000mm	1,235 x 2,000mm	1,000 x 2,000mm
<b>Height (each)</b>	82mm							
<b>GAS BOOSTER</b>								
<b>Rating</b>	32kW	32kW	40kW	40kW	40kW	40kW	40kW	40kW
<b>SMALL-SCALE TECHNOLOGY CREDITS (STCs)</b>								
<b>Zone 1</b>	23	33	28	38	40	27	38	40
<b>Zone 2</b>	26	38	30	42	43	30	41	43
<b>Zone 3</b>	23	34	28	38	41	28	38	41
<b>Zone 4</b>	20	29	25	33	36	25	33	36

\* STCs are subject to change. Consult [www.cleanenergyregulator.gov.au](http://www.cleanenergyregulator.gov.au) for updates.