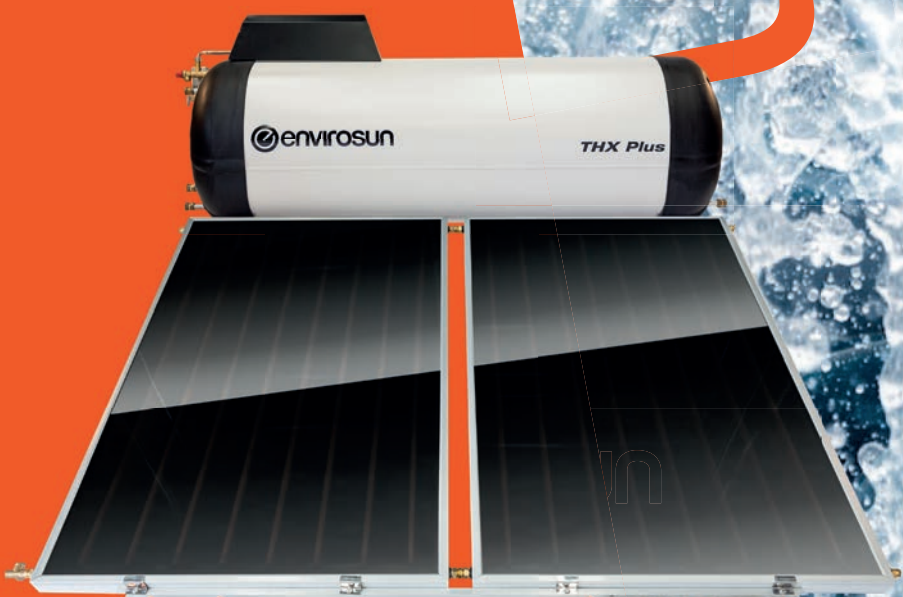


# TS System

ENVIRO SUN® Thermosiphon System







Australian  
Standard

AS2712: 2007  
Lic. SMK20021  
SAI Global



AS3498 Lic. WMKA21707  
SAI Global

## ENVIROSUN — SMARTER SOLAR SOLUTIONS

Everyone knows the benefits of solar water heating — by harnessing the sun's energy and converting it into hot water, a solar heater 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, innovation and commitment.

Building solar hot water systems is all that we do, and we do it well.

Our approach and philosophy is different — we are designers, not manufacturers; we are specifiers, not fabricators.

The benefit is that we're not shackled by an investment in out-dated plant and equipment. Instead we use the very best and latest components — globally sourced and matched to deliver performance, reliability and durability.



# TS

## THERMOSIPHON SYSTEMS

### Features of the TS system

1. Tank and collectors roof-mounted as a single, integrated unit.
2. Maximum solar efficiency with no power input.
3. Technologically-advanced safety and control systems.
4. Closed circuit for maximum solar collector freeze and fouling protection (THX only).
5. Superior durability, reliability and cost-effectiveness.



### AS NATURAL AS GRAVITY

Thermosiphon flow is a natural process that drives the weather, currents in the ocean and water heated in a pot. It occurs as a result of the density difference between warm and cool water – warm-water, because it is less dense, naturally rises and displaces denser cool-water.

The same process drives our TS and THX solar water heaters. The storage tank sits on the roof immediately above and nestled against the solar collectors. This reduces the amount of pipework between the tanks and collectors and keeps heat loss down. It also means that as fluid is heated in the solar collectors, it can naturally rise up to the cooler storage tank.

Provided the fluid in the collectors is hotter than the base of the storage tank, circulation continues. As the collector temperature approaches that of the tank, circulation stops - automatically. The whole process occurs without the need for any external power to operate pumps or valves – and the flow is naturally optimised.

With our TS systems, hot water from the collectors flows to the middle of the storage tank, and displaces cooler water lying in the bottom of the tank. This in turn flows down into the collectors to be heated.

For our THX system, the hot collector fluid enters the jacket chamber around the storage tank, transfers its heat to the water within the tank and returns to the solar collectors for reheating.





# TS AND THX — SOLAR WATER HEATERS



## STEEL THAT'S STAINLESS

At the heart of our heaters is the DEJONG tank – a high-pressure cylinder manufactured in Holland specifically for us. DEJONG is one of Europe's leading, independent producers of stainless hot water tanks.

It has a history that tracks back some 40 years and each year it makes more than 120,000 tanks.

DEJONG understands that not every grade of stainless steel is suited to hot water applications and knows that the total manufacturing process is an important element in preserving the corrosion-resistance of the material.

That's why our DEJONG tanks are made exclusively from grade 444 stainless steel and are 'pickled and passivated' after fabrication – a process that ensures our tanks give the longest possible serviceable life.

## A GREENHOUSE EFFECT

Solar collectors are like small greenhouses. The short wavelength rays of the sun pass through the high-transmittance glass covers to heat the absorber plate. Any re-emitted heat is in the form of long wavelength radiation which is reflected back into the collector tray by the glass. This clever application of the greenhouse effect is part of working with nature, not against it.

## SIMPLY AND RELIABLY THE BEST

Our TS and THX solar water heaters are amongst the most advanced hot water systems available. They're simple, efficient and durable for the lowest long-run cost.

The hot water storage tank and the solar collectors are roof-mounted as a single integrated unit. Water is heated in the collectors and rises naturally through the system and up to the insulated storage tank.

This passive, thermosiphon process negates the need for externally-powered pumps to move hot water from the collectors to the tank - it automatically matches the flow rate to solar radiation. The proximity of the collectors to the tank also helps by keeping transport heat losses to a minimum. The overall result is zero parasitic power losses, maximum solar collection efficiency and negligible system heat loss for the greatest possible energy savings.

And because the design is self-regulating with fewer moving parts or controls, it keeps doing this day-after-day, year-after-year.



## COPPER & CHROME THAT'S CONDUCTIVE

Our Selective Surface solar collectors are made to order and made to last. Within a weather-resistant aluminium tray, over thermal insulation and protected by a low-iron, tempered glass cover, sits our peak-performing solar absorber. Made entirely from highly-conductive and durable copper, our design fuses the absorber plate to the riser and header tubes. The plate is coated with a black-chrome surface that absorbs more and re-emits less solar radiation.

Our bespoke collectors gather extra energy while withstanding almost everything that's thrown at them. With two product designs available to ensure we maximise the solar collection even in the coldest and wettest locations.

# ENVIROSUN EXTENDED PRODUCT WARRANTY

Component	Up to 1 year from date of installation	From 1 to 5 years from date of installation	From 5 to 7 years from date of installation	From 7 to 10 years from date of installation
	Parts & Labour	Parts & Labour	Parts	35% Discount off RRP on Parts
TS Plus Open Circuit System				
Tank	✓	✓	✓	
Collector	✓	✓	✓	
Electrical Parts, Valves & Plumbing Accessories	✓			
THX Plus Closed Circuit System				
Tank	✓	✓	✓	✓
Collector	✓	✓	✓	✓
Expansion vessel	✓			
Electrical Parts, Valves & Plumbing Accessories	✓			



### A JACKET AGAINST THE COLD

For areas that are likely to experience near-freezing temperatures, we recommend our THX indirect systems. With the fluid in the solar collectors connected to a jacket chamber that is separate from the storage tank, a freeze-free closed-circuit is formed. Our THX systems are also very well-suited to use with poor quality water supplies.

Visit [www.envirosun.solar](http://www.envirosun.solar) to determine if the location where you intend to install your EnviroSun solar water heater is subject to near-freezing temperatures or poor water quality.



### A SYSTEM THAT TIES IT ALL TOGETHER

Our tanks and collectors are only part of the story. A modern solar system comprises a sophisticated blend of technologies - from control valves and thermostats to auxiliary boosters and special-purpose fixings. As you'd expect, our approach is to select the very best components and sub-systems to match to our DEJONG tanks and Selective Surface solar collectors.

**Envirosun TS and THX solar hot water system save more money with greater reliability and for a longer period of time.**

## COMPLIANCE AND STC CREDITS

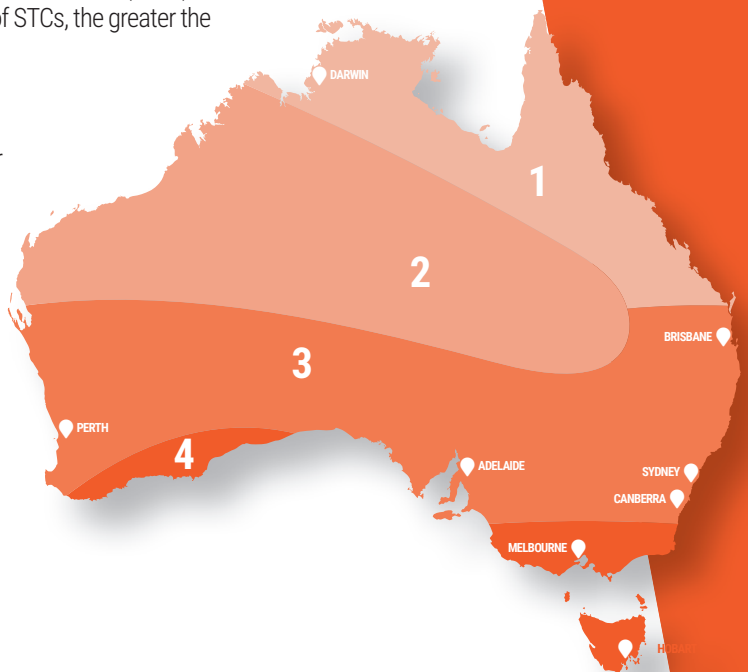
Envirosun is fully compliant to all relevant industry standards, and independently accredited by the Australian Government Clean Energy Regulator (CER). EnviroSun solar hot water systems appear on the CER Register and create Renewable Energy Certificates, which form the basis for determining Small-scale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

#### EXPLANATION:

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.







STANDARDSMARK  
LICENCE

SAI Global hereby grants:

**Energie Group Australia Pty Ltd**  
ABN 50 166 503 787

400 Victoria Road, Malaga, WA 6000, Australia

**StandardsMark Licence**

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

"The StandardsMark Licensee" 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 License is granted subject to the rules governing the use of the STANDARDSMARK and the Terms and Conditions for certification and licence. The Licensee covenants to comply with all the Rules and Terms and Conditions.

Certificate No: SMKP20021

Issued: 16 November 2017  
Expires: 3 July 2018

Originally Certified: 4 July 2003  
Current Certification: 16 November 2017

*N. Graham*

Nicole Graham  
General Manager SAI Global Certification Services



\* For details of manufacture, refer to the licensee  
The STANDARDSMARK is a registered certification trademark of SAI Global Pty Limited (a C.N. 050 666 642) and is issued under license by SAI Global Certification Services Pty Limited (ACN 108 718 666) / "SAI Global" 180 George Street, Sydney NSW 2000, GPO Box 9420 Sydney NSW 2001. This certificate remains the property of SAI Global and must be returned to SAI Global upon its request. Refer to [www.sai-global.com](http://www.sai-global.com) for the list of product models.

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CERTIFICATE  
OF CONFORMITY

SAI Global hereby grants:

**Energie Group Australia Pty Ltd**  
ABN 50 166 503 787

400 Victoria Road, Malaga, WA 6000, Australia

**Watermark Certificate of Conformity - Level 1**

Evaluated to:

**AS 3498-2009 - Authorization requirements for plumbing products - Water heaters and hot-water storage tanks**

"The WaterMark Licensee" the right to use or arrange the use of the WATERMARK as shown below only in respect of the goods described and detailed on the product schedule identified on [www.sai-global.com](http://www.sai-global.com) which are produced by the WaterMark Licensee or on behalf of the WaterMark Licensee and which comply with the appropriate Standard referred to above as from time to time amended. The License is granted subject to the rules governing the use of the WATERMARK and the Terms and Conditions for certification. The WaterMark Licensee covenants to comply with all the Rules and Terms and Conditions.

Certificate No: WIMKA21707

Issued: 8 December 2016  
Expires: 7 July 2020

Originally Certified: 8 July 2010  
Current Certification: 8 December 2016

*N. Graham*

Nicole Graham  
General Manager SAI Global Certification Services



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# TS FACT SHEET

# TS

## FOR FURTHER INFORMATION IN AUSTRALIA TELEPHONE:

For service, installation or warranty: 1300 825 143

For sales or product information: 1300 314 173

Head Office: Envirosun, 460 Victoria Road, Malaga WA 6090

ELECTRIC BOOSTED OPEN SYSTEMS	TS300/25e	TS300/40e	TS300/50e	TS300/60e	THX300/40e	THX300/50e
CER Code	TS300/25/O/E24/S2/E25BC	TS300/40/O/E24/S2/E20BC	TS300/50/O/E24/S2/E25BC	TS300/60/O/E24/S2/E20BC	TS300/40/C/E24/S2/E20BC	TS300/50/C/E24/S2/E25BC
Tank	TS300/O/E24/S2	TS300/O/E24/S2	TS300/O/E24/S2	TS300/O/E24/S2	TS300/C/E24/S2	TS300/C/E24/S2
Collectors	E25BC	E20BC	E25BC	E20BC	E20BC	E25BC
Storage capacity	304L	304L	304L	304L	304L	304L
Mass empty	102kg	129kg	143kg	164kg	160kg	174kg
Mass full	408kg	437kg	451kg	473kg	468kg	482kg
Footprint	2,010 x 2,600mm	2,2238 x 2,600mm	2,645 x 2,600mm	3,260 x 2,600mm	2,238 x 2,600mm	2,645 x 2,600mm
Boost capacity	140L	140L	140L	140L	140L	140L

TANK						
Model	TS300/O/E24/S2	TS300/O/E24/S2	TS300/O/E24/S2	TS300/O/E24/S2	TS300/C/E24/S2	TS300/C/E24/S2
Mass empty	59kg	59kg	59kg	59kg	77kg	77kg
Mass full	363kg	363kg	363kg	363kg	388kg	388kg
Footprint	650 x 2,150mm	650 x 2,150mm	650 x 2,150mm	650 x 2,150mm	650 x 2,150mm	650 x 2,150mm
Height	600mm	600mm	600mm	600mm	600mm	600mm

COLLECTORS						
Quantity	1	2	2	3	2	2
Model	E25BC	E20BC	E25BC	E20BC	E20BC	E25BC
Mass empty (each)	41.0kg	34kg	41.0kg	34kg	34kg	41.0kg
Mass full (each)	43.0kg	35.7kg	43.0kg	35.7kg	35.7kg	43.0kg
Footprint (each)	1,235 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
Height (each)	82mm	82mm	82mm	82mm	82mm	82mm

ELECTRIC BOOSTER						
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Rating	2.4kW	2.4kW	2.4kW	2.4kW	2.4kW	2.4kW
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SMALL-SCALE TECHNOLOGY CREDITS (STCs)						
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Zone 1	27	36	41	42	29	38
Zone 2	30	41	43	42	31	42
Zone 3	26	35	40	41	28	36
Zone 4	23	30	35	36	24	31

GAS BOOSTED OPEN SYSTEMS	TS300/25g	TS300/40g	TS300/50g	TS300/60g	THX300/40g	THX300/50g
CER Code	TS300/25/O/GR26/S2/E25BC	TS300/40/O/GR26/S2/E20BC	TS300/50/O/GR26/S2/E25BC	TS300/60/O/GR26/S2/E20BC	TS300/40/C/GR26/S2/E20BC	TS300/50/C/GR26/S2/E25BC
Tank	TS300/O/E24/S2	TS300/O/E24/S2	TS300/O/E24/S2	TS300/O/E24/S2	TS300/C/E24/S2	TS300/C/E24/S2
Collectors	E25BC	E20BC	E25BC	E20BC	E20BC	E25BC
Storage capacity	304L	304L	304L	304L	304L	304L
Mass empty (exc Booster)	123kg	150kg	159kg	185kg	181kg	195kg
Mass full (exc Booster)	429kg	458kg	472kg	494kg	489kg	503kg
Footprint	2,010 x 2,600mm	2,2238 x 2,600mm	2,645 x 2,600mm	3,260 x 2,600mm	2,238 x 2,600mm	2,645 x 2,600mm
Boost Rate (max)	26L/min	26L/min	26L/min	26L/min	26L/m	26L/m

TANK						
Model	TS300/O/E24/S2	TS300/O/E24/S2	TS300/O/E24/S2	TS300/O/E24/S2	TS300/C/E24/S2	TS300/C/E24/S2
Mass empty	59kg	59kg	59kg	59kg	77kg	77kg
Mass full	363kg	363kg	363kg	363kg	381kg	381kg
Footprint	650 x 2,150mm	650 x 2,150mm	650 x 2,150mm	650 x 2,150mm	650 x 2,150mm	650 x 2,150mm
Height	600mm	600mm	600mm	600mm	600mm	600mm

COLLECTORS						
Quantity	1	2	2	3	2	2
Model	E25BC	E20BC	E25BC	E20BC	E20BC	E25BC
Mass empty (each)	41.0kg	34kg	41.0kg	34kg	34kg	41.0kg
Mass full (each)	43.0kg	35.7kg	43.0kg	35.7kg	35.7kg	43.0kg
Footprint (each)	1,235 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
Height (each)	82mm	82mm	82mm	82mm	82mm	82mm

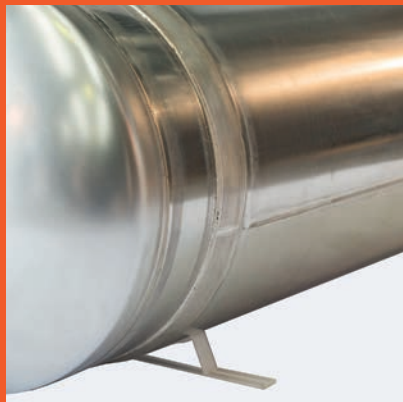
GAS BOOSTER						
Heat Output	42kW	42kW	42kW	42kW	42kW	42kW

*Gas Consumption (Nom) 188MJ/hr*

SMALL-SCALE TECHNOLOGY CREDITS (STCs)						
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Zone 1	24	35	40	42	27	36
Zone 2	27	40	44	44	30	41
Zone 3	24	35	41	43	27	36
Zone 4	21	30	36	37	24	31

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



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