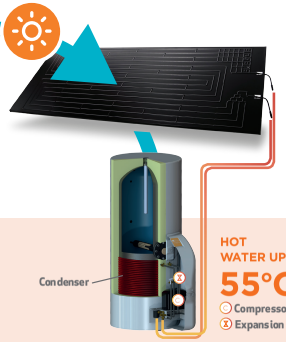
THERMODYNAMIC SOLAR SYSTEM OPERATING PRINCIPLE

Solar Panel

- Captures heat regardless of climate.
- Primary circuit does not need to dissipate excess heat on hotter days.
- Good architectural integration due to flexibility with panel location.

Equipment

- No ducts required
- No ventilation required
- No defrost cycle necessary
- Very efficient compressor with low energy consumption
- No back-up required
- Hot water guaranteed, available day and night, hail, rain, wind or shine up to 55ºC



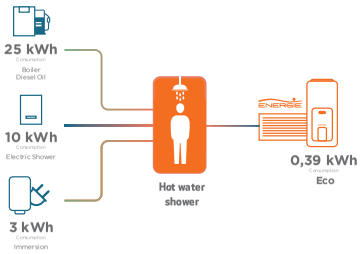
DOMESTIC HOT WATER

HOT WATER UP TO **55ºC**

Compressor

Expansion Valve

Distribution of consumption to different systems



DID YOU KNOW?

That all thermodynamic solar systems only have one mechanical element that requires electricity? This element is a low energy consumption compressor and is extremely efficient. As the capacity to capture heat from the environment is primarily ensured through solar radiation, it is superior to other equipment with the same goal offering maximum savings. The maintenance of the system is practically non-existent and it has high longevity.

Solar Panel

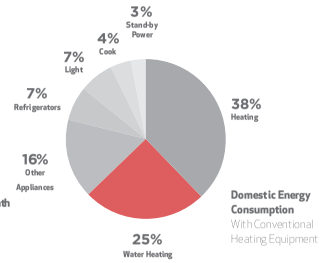
- ANODIZED ALUMINIUM, WITH HYDROPHOBIC FLEXIBLE COATING.
- LIGHT WEIGHT – ONLY 8 KILOS, EASY TO TRANSPORT AND INSTALL.
- DIMENSIONS: 2m X 0,8m X 0,02m.
- NO GLASS, RUBBER OR FRAGILE MATERIALS.
- NO RISK OF OVER HEATING.
- PANEL IS MADE OF A NON-CORROSIVE, ANNODISED ALUMINIUM.
- HIGH RESISTANCE TO HUMIDITY.
- IT CAN BE INSTALLED FROM 10º TO 85º IN A HORIZONTAL POSITION.
- PANEL CAN BE EAST, WEST, OR SOUTH FACING AND DOES NOT NEED TO GO ON THE ROOF.
- THE PANEL DOES NOT LOSE ITS EFFICIENCY WITH TIME OR WITH DIRT.
- NO NEED TO CLEAN.
- ESTIMATED USEFUL LIFE OF 25 YEARS.

More detailed information on **energie.pt**

SAVE UP TO

85%

Taking into account Eco300
7 Hours operation per day
Consumption of 0.39 kW/h
Energy necessary / month: 0.39 kW x 7h x 30 days = 81.9 kWh / month



Authorized Dealer

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DESIGN, DEVELOPMENT AND EUROPEAN MANUFACTURING

ENERGIE®
THERMODYNAMIC SOLAR ENERGY

ECO

DOMESTIC HOT WATER

ECONOMY | COMFORT | EFFICIENCY

PROBABLY THE MOST ADVANCED SOLAR WATER HEATER IN THE WORLD

HOT WATER 24 HOURS A DAY

WORKS DAY AND NIGHT, RAIN OR SHINE

UP TO 85% SAVINGS

THE LATEST GENERATION OF SOLAR ENERGY

WORKS WITH YOUR PV SYSTEM

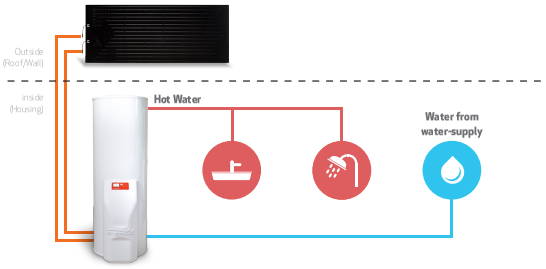
New Design

We select the best components and subject our systems to rigorous quality testing to ensure maximum customer satisfaction

100% ENVIRONMENTALLY FRIENDLY

MAXIMUM PRODUCTIVITY WITH GOOD SOLAR GAIN

- HEAT IS CAPTURED IN THE FORM OF SOLAR RADIATION, ENVIRONMENTAL TEMPERATURE, RAIN, WIND AND EVEN SNOW.
- THE HEAT PRODUCED ON COLDER DAYS, EVEN AT NIGHT IS SUFFICIENT TO PRODUCE THE WATER TEMPERATURE DESIRED.
- THE SOLAR PANEL IS LIGHT, DISCREET AND VERSATILE IN TERMS OF WHERE TO PUT IT.
- OUTSIDE CYLINDER CONDENSER (NO CONTACT WITH WATER).
- 3RD GENERATION THERMODYNAMIC SOLAR ENERGY.
- HOT WATER UP TO 55ºC AVAILABLE 24h PER DAY.
- LOW MAINTENANCE.
- THE ENERGY CONSUMPTION OF THE EQUIPMENT IS REDUCED DUE TO A SUPER EFFICIENT COMPRESSOR.
- NO DEFROST CYCLE.
- VERSIONS WITH 1 OR 2 THERMODYNAMIC SOLAR PANELS.
- STAINLESS STEEL CYLINDER.
- AVAILABLE WITH OR WITHOUT SUPPLEMENTARY COIL.



FAQs

What is the ENERGIE Thermodynamic Solar System?
ENERGIE Thermodynamic Solar Systems use a technology based on the principle of the French physicist Nicolas Carnot, who discovered thermodynamics. Thanks to him, Thermodynamic Solar Panels are capable of capturing the heat from the sun, or even from the rain and wind, 24 hours a day, 365 days a year. One of the innovative aspects is that an ecological fluid at freezing temperatures circulates through the solar panel, allowing a greater uptake of the solar energy and a higher absorption of the environmental energy that is then released to the water through a heat exchanger. Thus, ENERGIE's Thermodynamic Solar Panels surpass the limitations of the traditional solar panels and make possible a more efficient increase of the water temperature.

Can I have hot water in days without sun?
Because the fluid passes inside the panel at very low temperatures, it can receive more solar energy than a normal liquid and even on days without sun or at night. Because of this thermal difference, the solar panel can capture the heat existing in the environment and transmit it to the water. Thus, the system always ensures hot water up to 55ºC.

Does the Thermodynamic Solar System require much maintenance?
Maintenance is almost non-existent, you are just advised to check the magnesium anode, a protection element of the tank, once a year.

Does this system have any anti-bacterial device?
Yes it does. In line with common standards, the controls for the domestic hot water system has a function that allows the tanks temperature to be raised to over 70ºC. This can be activated manually or automatically. Deactivation is automatic.

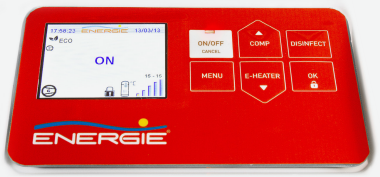
Can the ENERGIE Thermodynamic Solar System be installed in any region?
Yes it can. The ENERGIE Thermodynamic Solar System can be installed anywhere in the country, including in seaside areas and areas of high altitude.

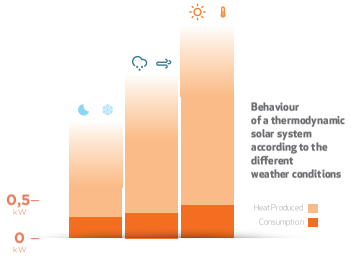
Electronic Controller

ECO Operating Mode
The equipment only works as a Thermodynamic Solar System.

AUTO Operating Mode
The equipment works as a Thermodynamic Solar System and/or electrical support should it be required.

BOOST Operating mode
The equipment works with a Thermodynamic Solar System and electrical support simultaneously.





Behaviour of a thermodynamic solar system according to the different weather conditions

WARRANTY 10 YEARS SOLAR PANEL
WARRANTY 5 YEARS CYLINDER

Check warranty conditions

MAXIMUM EFFICIENCY

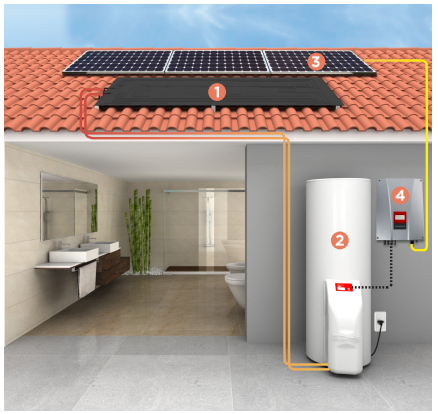
ErP READY — APPLIES TO EUROPEAN DIRECTIVE FOR ENERGY RELATED PRODUCTS

PV intelligent function

Take Full advantage of your PV System:

- Sets new standards of smart energy management;
- Maximize your PV Solar Panels production and reduce your DHW costs;
- Maximize the solar irradiation available by having the thermodynamic solar system working more when there is more sun available;
- Get the balance between PV production and consumption with our intelligent controller.

With Smart PV Integration included, the ENERGIE solar system absorbs the extra power generated by PV Panels, Wind Energy or Small Hydro storing, that would be lost energy, into the water, enabling you to save even more.



1 Thermodynamic Solar Panel
2 DWH Cylinder + Thermodynamic Block
3 PV Panels
4 Inverter

List of equipment from the range

Model	No. of Panels	Thermal Power W(Max)	Power Consumption W(Avg)	Electrical Supply V/Hz	Extra Coil	Liters	No. of People	ErP Class	Tapping Profile
Eco 250 i	1	2900	390	230/50		250	4	A+	XL
Eco 300 i	1	2900	390	230/50		300	5	A+	XXL
Eco 250 ix	1	2900	390	230/50		250	4	A+	XL
Eco 300 ix	1	2900	390	230/50		300	5	A+	XXL
Eco 250 is	1	4550	595	230/50		250	5	A+	XL
Eco 300 is	1	4550	595	230/50		300	6	A+	XXL
Eco 500 is	1	4550	595	230/50		455	9	A+	XXL
Eco 250 isx	2	4550	595	230/50		250	5	A+	XL
Eco 300 isx	2	4550	595	230/50		300	6	A+	XXL
Eco 500 isx	2	4550	595	230/50		455	9	A+	XXL

i (Stainless Steel) | s (2 Solar Panels) | x (Suplementary Coil)