

# SOLAR BLOCK

DOMESTIC HOT WATER,  
CENTRAL HEATING &  
SWIMMING-POOL  
HEATING



**LATEST GENERATION  
IN, THERMODYNAMIC  
SOLAR SYSTEM.**  
COMFORT, ECONOMY  
& ECOLOGY, DAY &  
NIGHT, HAIL, RAIN, WIND  
OR SHINE.

HOT WATER  
**24**  
HOURS  
A DAY

SALINE  
ENVIRONMENT RESISTANCE  


LONGEVITY  
**+20**  
YEARS

SOLAR  
PERFORMANCE  


HOT WATER  
**55°c**  
UP TO

# THERMODYNAMIC SOLAR SYSTEM

## WORKING PRINCIPLE

The evaporation of the fluid that runs inside the closed looped circuit happens on the solar panel by capturing the heat from the sun, wind, rain and surrounding air by natural convection.

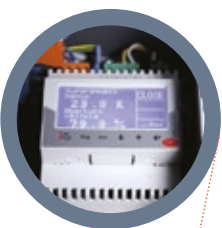
The heated fluid then travels to the compressor, that will compress the fluid increasing its pressure and also its temperature.

Then it goes to the heat exchanger where where this heat is transferred to the water.

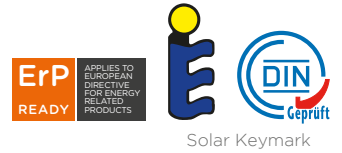
After this, an expansion valve will make the pressure and temperature drop to sub-zero values. The fluid travels up to the thermodynamic solar panel and the cycle repeats again.

## EQUIPMENT

- No ducts and no fans
- No energy-consuming defrost cycles
- Super efficient low consumption compressor
- No need to install support equipment



Electronic expansion valve



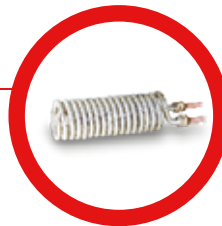
## SOLAR PANEL

- Captures heat regardless of weather factors
- Primary circuit does not need to dissipate excess heat on hotter day
- Easy architectural integration, versatile without visual impact



## Domestic hot water for industrial use

Heat dissipation through radiators, underfloor heating, convectors, among others



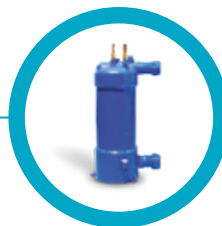
## Central heating

Hot water up to 55°C is always guaranteed 24h, 365 days a year



## Swimming pool heating

Heated swimming pool all year



# ECO XL

Thermodynamic solar solution for domestic hot water industrial use

Reduce hot water bill in your condominium, hotel, school, gym or industry with ENERGIE Thermodynamic Solar System. The solution Eco XL is the latest generation in water heating. Uses a high performance innovative technology that allows the user to benefit from a substantial reduction in water heating costs and getting a quick payback of the investment.

You can get water up to 55°C on rainy days or during the night thanks to its innovative operating principle. The maintenance of the solar system is practically non-existent. Only required to check the tank sacrificial anode. The solar system XL Eco does not lose performance over the years, always assuring optimal performance. The capabilities of deposits ranging from 1000 to 6000 liters, it is also possible to link together multiple systems to higher needs. The high performance of the systems also allows a reduction of the area of solar panels compared to traditional systems.

**HOTELS, HOSPITALS, SCHOOLS, SPORTS HALLS, INDUSTRY WITH DOMESTIC ECONOMY**



- The solar panels are light, discreet and have versatility in terms of where to put them
- The energy consumption of the equipment is reduced due to a very efficient compressor
- Latest generation of solar energy
- Solar hot water up to 55°C available
- Almost non-existent maintenance
- Versions with 1 or 2 cylinders
- Stainless steel Aisi316 cylinders with water / water heat exchanger (optional) to connect a boiler
- Solutions from 6 up to 40 thermodynamic solar panels
- Capacities from 1000 up to 6000 liters

MODEL		Eco 1000	Eco 1500	Eco 2000	Eco 3000	Eco 4000	Eco 6000
Solar Panels		6	12	12 / 16	16 / 28	28	40
Nominal Capacity	l	1000	1500	2000	3000	4000	6000
Maximum Thermal Power	W	11800	16580	16580 / 24210	24210 / 38220	38220	54600
Power Consumption	W	1230	2010	2010 / 3210	3210 / 5650	5650	8450
Thermal storage		1	1	1 or 2	1 or 2	2	2
Users*		22	34	45	68	90	135

\* Considering an average consumption of 50 liters / persons / day

# CENTRAL HEATING

## Thermodynamic solar solution for central heating

The Thermodynamic Solar System represents high levels of economy and comfort when heating your house. The cutting edge technology used allows you to obtain both high performance and high efficiency. Thanks to the ability of a Thermodynamic System to harness a variety of renewable energy sources such as sun, wind and rain; a Solar Thermodynamic Systems represents the best solution to reducing energy consumption. With no greenhouse gas emissions, Thermodynamic Solar Systems provide a major environmental benefit. A single system can efficiently and effectively provide both the space heating and domestic hot water requirements. You can also use your system to provide central heating during the colder seasons and then switch to the heating of the pool during the warmer months, maximizing your investment.

## COMFORT, CONVENIENCE WITH MAXIMUM ECONOMY



- Low Co<sub>2</sub> emissions
- Super efficient environment heating at low temperature
- Non-existent programmed maintenance
- Possibility of joining all house heating equipment into just one solution
- Highly efficient scroll compressor
- Free of defrost cycles
- Small dimension indoor unit
- Central heating without chimneys and burnt gases, totally environmentally friendly

MODEL		Solar Block 6	Solar Block12	Solar Block 16	Solar Block 28	Solar Block 40
Solar Panels		6	12	116	28	40
Maximum Thermal Power	W	7500	16580	24210	38220	54600
Power Consumption	W	1230	2010	3210	5650	8450
Water Flow	m <sup>3</sup> /h	0,7	1,0	1,5	3,0	5,0
Electrical Supply		1-/ 230V / 50 Hz or 3-/ 400V / 50 Hz			3-/ 400V / 50 Hz	
Area to be heated*	m <sup>2</sup>	90	150	220	300	450

\* Does not relieve the sizing of the solar system according to the building, installation and geographic location



# SWIMMING POOL HEATING

Thermodynamic solar solution for swimming pool

The perfect solution for those who want to enjoy their swimming pool all year round with both economic and environmental benefits. With high levels of reliability and efficiency, ENERGIE Thermodynamic Solar Systems are not constrained by the limitations of traditional systems. The system is designed to be maintenance free, thereby reducing running costs. The Thermodynamic Solar System uses a sealed circuit that does not require the periodic addition of fluid. Additionally, the system uses a titanium heat exchanger with very high resistance to the swimming pool chlorine. Needs also less solar panels than traditional systems, being this way more economical and efficient.

**HEATED SWIMMING-POOL EVERY DAY OF THE YEAR**



- Swimming-pool heated all year round with the lowest cost in the market
- Non-existent programmed maintenance
- Possibility of joining all house heating equipment into just one solution
- Highly efficient scroll compressor
- Free of defrost cycles
- Small dimension indoor unit
- High performance electronic expansion valve

MODEL		Solar Block 6	Solar Block 12	Solar Block 16	Solar Block 28	Solar Block 40
Solar Panels		6	12	16	28	40
Maximum Thermal Power	W	7500	16580	24210	38220	54600
Power Consumption	W	1230	2010	3210	5650	8450
Electrical Supply		1-/ 230V / 50 Hz or 3-/ 400V / 50 Hz			3-/ 400V / 50 Hz	
Gross Weight	kg	48	96	128	210	320
Volume to be heated*	m <sup>2</sup>	16	36	53	100	120

\* Does not relieve the sizing of the solar system according to the swimming pool, installation and geographic location

This flyer has been created for information purposes only and does not constitute a contractual offer for ENERGIE EST Lda. ENERGIE EST Lda. has compiled the contents of this flyer to the best of its knowledge. No express or implied guarantee is given regarding the completeness, accuracy, reliability or fitness for a particular purpose of its content and the products and services it presents. Specifications are subject to change without notice. ENERGIE EST Lda. explicitly rejects any direct or indirect damages, in its broadest sense, resulting from or related to the use and/or interpretation of this flyer. RIVO/2022



Project co-financed by:

**NORTE2020**  
PROGRAMA OPERACIONAL REGIONAL DO NORTE

**PORTUGAL**  
**2020**

 **UNIÃO EUROPEIA**  
Fundo Europeu  
Estrutural e de Investimento



Zona Industrial de Laúndos  
Lote 48, 4570-311 Laúndos  
Póvoa de Varzim, Portugal  
**EMAIL** [energie@energie.pt](mailto:energie@energie.pt)  
**SITE** [www.energie.pt](http://www.energie.pt)

Follow us on:

**ENERGIE PORTUGAL**



Authorized dealer