DESIGN, DEVELOPMENT
AND EUROPEAN MANUFACTURING

ENERGIE®

RENEWABLE ENERGY

THERMODYNAMIC SOLAR ENERGY | HEAT PUMPS

GENERALCATALOGUE

RENEWABLE ENERGY | ECONOMY | INDEPENDENCE | ECOLOGY

Follow us in
ENERGIE PORTUGAL

WE ARE YOUR ENERGY!

Mod. 051.9

ENERGIE®
THERMODYNAMIC SOLAR ENERGY

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Company certifications

Partners of the organizations

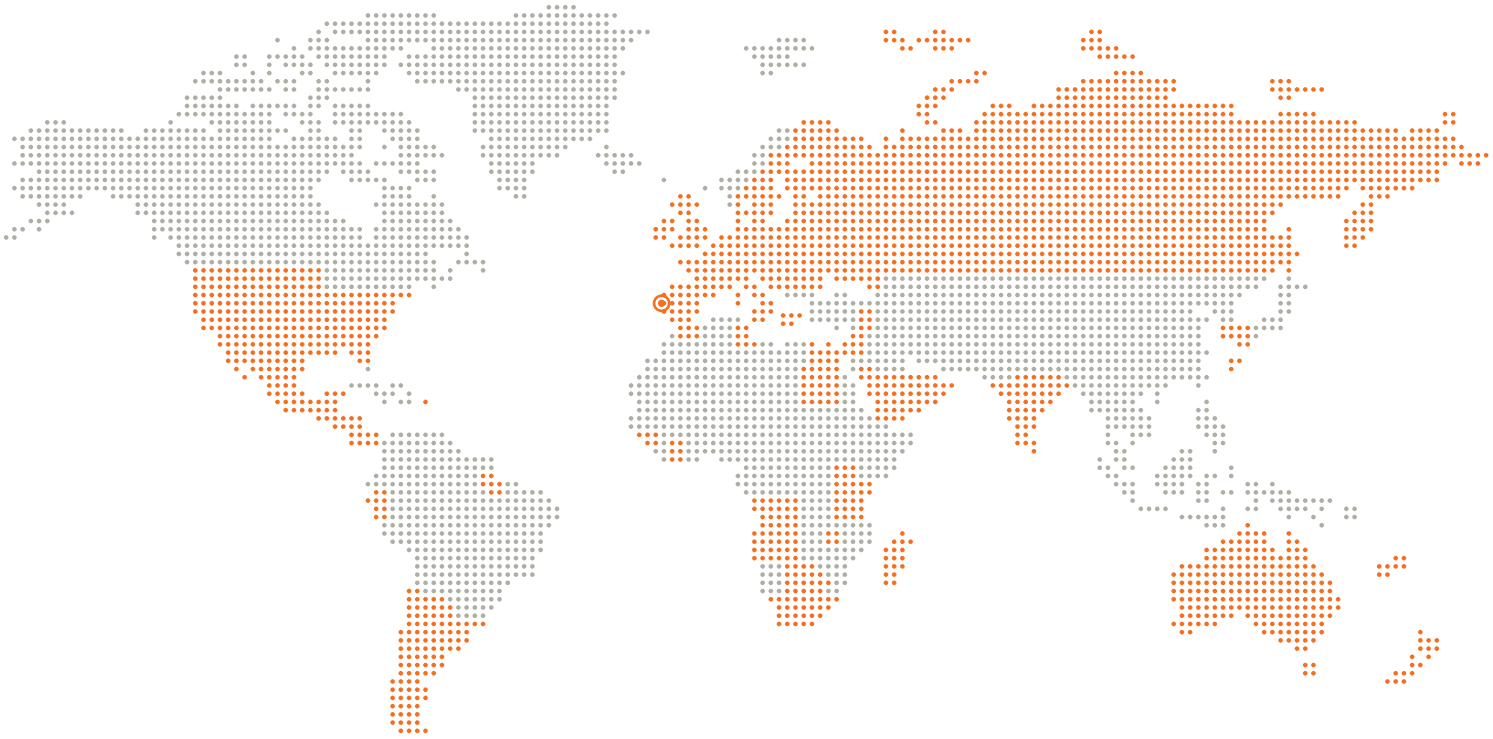
ENERGIE
THERMODYNAMIC SOLAR ENERGY

THE ENERGIE BRAND

Based on a customer satisfaction policy, the brand is synonymous with reliability, quality, innovation and efficiency. It is governed by strict standards that aim at economy, comfort and well-being of the consumers.
To find out more about us go to:

www.energie.pt

ENERGIE AROUND THE WORLD 50 COUNTRIES 5 CONTINENTS



COMPANY CHRONOLOGY

1981
The company is founded with the name Lar Bombas Sistemas Hidráulicos e Energia Solar (Home Pumps Hydraulic Systems and Solar Energy).

1990
The ENERGIE brand is patented and registered world-wide.

2000
Creation of a Research and Development Centre (R&D).

2002
Inauguration of new premises with 1000 m²

New industrial complex, totalling 4000 m2. The company name changes to the brand name ENERGIE Est, Lda.

2008
Recognition of status as an SME Leader and SME. Excellence to the present day.

2010
Operating in over 30 countries.

2011
ENERGIE's 30 year commemoration.

2013
Inauguration of a new industrial unit for the production of heat pumps and thermal storage.

2014
Beginning of production of aerothermal heat pumps.

2016
Beginning of production of geothermal heat pumps.

2018
Present in more than 50 countries.

PRESENTE

PICTOGRAMS OF THE PRODUCT

Pictograms are icons developed to make the interpretation of key characteristics of each one of our products easier. Check our list of pictograms below and discover the meaning behind each one. When you find one in a product technical sheet you can return to this page to check the meaning if you have doubts.

SOLAR PERFORMANCE

The performance of the equipment is far higher than the COP of any aerothermal heat pump when exposed to Solar Radiation.

ANTI-LEGIONELLA

Function that allows the user to disinfect/sanitise the quipment cylinder.

EXTRA COIL

Equipment with a supplementary/extra coil that allows the other auxiliary systems to be connected.

AUTOMATIC DEFROST

Defrost function with automatic management. The equipment does defrosting to guarantee that it will function even when the temperature is below zero.

R134A

Cooling liquid that is environmentally friendly, nonflammable and non-toxic.

R407C / R410A

Cooling liquid that is environmentally friendly, nonflammable and non-toxic.

ENERGY EFFICIENCY

Efficient equipment with low energy consumption.

ENERGY EFFICIENCY +

Super Efficient Equipment with low energy consumption.

EASY TO INSTALL

The system has a small amount of installation items.

GREAT DURABILITY

The system is designed to have longevity.

ANTICORROSION

The system has magnesium anode, which carries out the cathodic protection (anticorrosion) of the cylinder.

RESPECT FOR THE ENVIRONMENT

The polyurethane used inside the cylinder is free of hydrofluorocarbons.

AMBIENT TEMPERATURE DISPLAY

The command panel display shows the temperature of the cylinder.

MADE IN EUROPE

European production.

SILENT

The equipment does not make any sound in your home.

FAST HEATING TIME

Equipment with fast heating time.

ENERGY LABELING AND DIRECTION ErP, WHY?

Halting climate change, securing energy supplies and increasing industrial competitiveness are some of the most important challenges facing the European Union. Energy saving is the best way to address them. With Directive 2009/125/EC on the ecological design of energy-related products (ErP Directive, Energy related Products) and Directive 2010/30/EC on energy labeling, the general requirements (valid for all household products) have been set for energy savings in one of the most energy-consuming and polluting sectors in the European Union. From the provisions of the previous directives, specific legislative tools have been created for each family of products: the European regulations. The regulations indicate how to use the energy label and define the minimum energy efficiency that new products should bring to market. Once published, the regulations are immediately applicable in all EU countries and do not require transposition into national regulations. The products for heating and hot water production also have their regulations on ErP and labeling. The energy label simplifies the process of choosing the most efficient product.

Basic Principles

- Defines the shape and content of the energy labels of products and systems for heating and storing hot water;
- Establishes standards to inform consumers about the energy performance of products;
- Defines the responsibilities of suppliers and sellers.

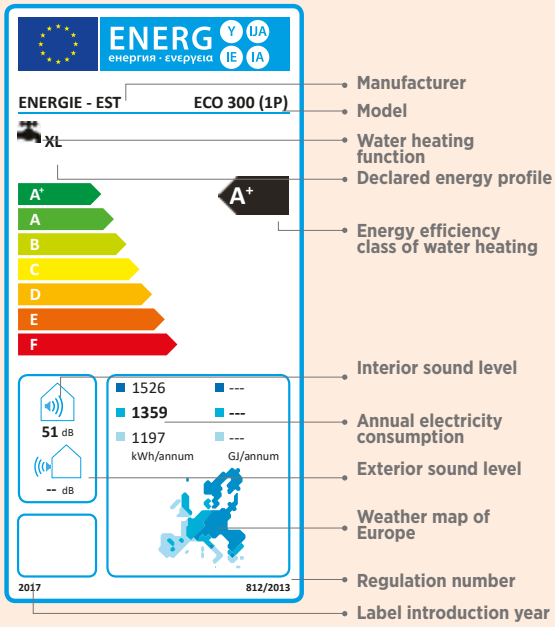
WHY WERE THE HEATING AND HOT WATER PRODUCTS CHOSEN?

The preparatory study carried out by the European Commission has confirmed that domestic heating and hot water production systems account for approximately 30% of Europe's energy consumption. It was also estimated that, by designing green products (minimum requirements) and encouraging end-users to acquire the most efficient technologies (energy label), the following could be achieved in 2020:

Total annual energy savings equivalent to 56 million tons of oil. The equivalent of erasing all heating and hot water equipment throughout the Iberian Peninsula. This would mean a reduction in CO_2 emissions by 136 Million tons, approximately what would absorb a forest the size of Portugal.

From these premises were created the regulations on ecological design and energy labeling of boilers, heat pumps, micro-cogeneration units, water heaters and hot water tanks. Since September 26, 2015, the regulations have mandated these products to meet minimum efficiency and labeling requirements.

ECOLABEL EXEMPLIFICATIVE LABEL



ECODESIGN DIRECTIVE

The Ecodesign directive for heating and hot water production products establishes minimum performance requirements that all appliances must comply with. The new requirements will eliminate less efficient technologies from the market and thus raise the level of energy efficiency of the basic supply. In addition, it will be necessary to comply with those requirements in order to be able to include in the products the CE marking, which is indispensable for their commercialization in the European market. The ErP directive is only applicable to products placed on the market since 9/26/2015. Products previously purchased or already at the dealers' points of sale or warehouses may continue to be sold and installed even if they do not meet the new requirements.

HEATING / REG. 813/2013

- BOILERS (GAS, ELECTRIC, DIESEL)
- HEAT PUMPS (GAS, ELECTRIC)
- MICROCOGERATION UNITS (WITH MAXIMUM ELECTRICAL POWER <50 KW)

HOT WATER / REG. 814/2013

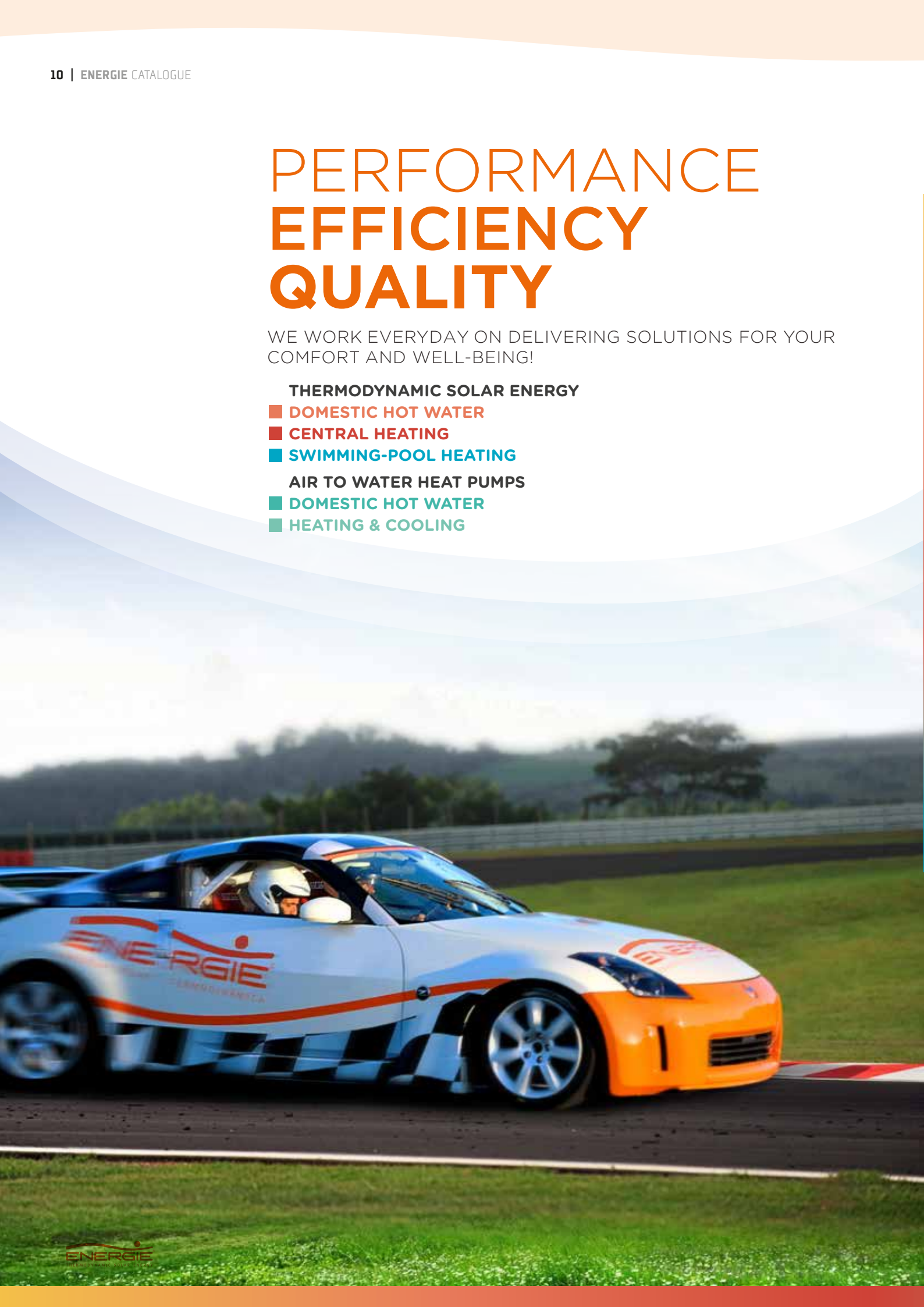
- CONVENTIONAL GAS / DIESEL / ELECTRIC HEATERS
- HOT HEAT WATER PUMPS
- THERMAL SOLAR INSTALLATIONS
- HOT WATER TANKS (WITH A CAPACITY ≤ 2000 LITERS)

PERFORMANCE
EFFICIENCY
QUALITY

WE WORK EVERYDAY ON DELIVERING SOLUTIONS FOR YOUR COMFORT AND WELL-BEING!

THERMODYNAMIC SOLAR ENERGY
- DOMESTIC HOT WATER
- CENTRAL HEATING
- SWIMMING-POOL HEATING

AIR TO WATER HEAT PUMPS
- DOMESTIC HOT WATER
- HEATING & COOLING



ÍNDICE

THERMODYNAMIC SOLAR SYSTEM OPERATING PRINCIPLE

Solar Panel

- Captures heat regardless of climate.
- Primary circuit does not need to dissipate excess heat on hotter days.
- Easy integration with architecture, versatile, no visual impact.

Equipment

- Without ducts.
- Without ventilators.
- Without defrost cycles that use up energy.
- Super efficient compressor with low energy consumption.
- No need to install support equipment.
- Hot water guaranteed, available day and night, hail, rain, wind or shine up to 55°c.

DOMESTIC HOT WATER
CENTRAL HEATING
SWIMMING-POOL HEATING

HOT WATER UP TO 55°C

The Thermodynamics Solar System joins two incomplete technologies, the heat pump and the solar thermal collector.
Heat pumps are quite efficient equipment but the heat they produce from their renewable component varies only according to changes in the temperature of the environment. Thermal solar collectors are the best source of heat on hot and sunny days but they are totally inefficient whenever there is no sun.
The Thermodynamic Solar Technology manages to surpass the limitations of both the heat pump and solar collector technologies.
Through the cooling liquid (R134a or R407c) which covers a closed circuit, the liquid goes into the solar panel and suffers the action of sun, rain, wind, environment temperature and other climate factors. During this process the liquid gains heat in a more favourable way than a heat pump. After this stage, the heat is transferred to an exchanger with the help of a small compressor, which heats the water. The liquid cools down and the circuit is repeated.

As the fluid has a boiling temperature of approximately -30°C, the system works even when there is no sun and it even works at night, providing hot water at 55°C, day and night, hail, rain, wind or shine, unlike the traditional solar thermal system.
The energy consumption of the system is basically the same as a fridge compressor that makes the liquid circulate. There are no ventilators that help the evaporation process, or defrost cycles, which imply unnecessary energy consumption, unlike what happens with heat pumps.

THERMODYNAMIC SOLAR PANEL

Right Panel **Left Panel**

There are left and right thermodynamic solar panels. These can be distinguished by looking at the side that has the connections, as seen in the picture.

- ANODIZED ALUMINIUM, WITH 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.
- NO RISK OF FREEZING.
- HIGH RESISTANCE IN SALINE ENVIRONMENT.
- HIGH RESISTANCE TO HUMIDITY.
- IT CAN BE INSTALLED FROM 10^{0} TO 85^{0} IN A HORIZONTAL POSITION
- IT CAN BE INSTALLED ON THE ROOF, WALL, IN THE GARDEN, ETC...
- THE PANEL DOES NOT LOSE ITS EFFICIENCY WITH TIME OR WITH DIRT.
- NO NEED TO CLEAN.
- ESTIMATED USEFUL LIFE OF 25 YEARS.
- APPROVED FOR CORROSION TEST SALINE FOG EQUIVALENT TO 20 YEARS.

THERMODYNAMIC SOLAR BLOCK

ELETRONIC EXPANSION VALVE

Solar Block

DOMESTIC HOT WATER INDUSTRIAL USE

CENTRAL HEATING

SWIMMING-POOL HEATING

SOLAR BLOCK

This unit of the Thermodynamic Solar System has the following main components: a low consumption compressor, which is responsible for the circulation of the liquid throughout the whole system, a heat exchanger that dissipates heat into the water for consumption (Domestic Hot Water) or the closed heating circuit (Central Heating and Swimming-pool Heating) and an expansion component that reduces the boiling temperature from approximately – 30°C so that it can go back to the thermodynamic solar panels and capture heat again.

- MOST ADVANCED SCROLL COMPRESSOR IN THE MARKET.
- OPTMIZED SOUNDPROOFING.
- ELECTRONIC EXPANSION VALVE.
- VERSATILE ELECTRONIC CONTROLLER WITH INTUITIVE HANDLING.
- EXCELLENT QUALITY HEAT EXCHANGERS.

ELECTRONIC CONTROLLER

Electronic controller Inside

ESC **Exit**

Unlock | ON/OFF

SET **Menu | Modify | Set**

Change Values | Go through Menu | Sub-Menu | Display

\# **ON/OFF Backup**

The Solar Block controller is the interface between the equipment and the user. Among other functionalities, it gives access to:

- SYSTEM STATUS
- TEMPERATURE INFORMATION THROUGH RESPECTIVE SENSOR
- PROGRAMMING (DAILY/WEEKLY/ETC)
- DATE AND TIME INFORMATION
- EASY TO CONTROL THROUGH THE INSTALLATION BOX
- SIMPLIFIED PARAMETRIZATION
- OUTLETS TEST
- 12 PREDEFINED CONFIGURATIONS
- INTEGRATION IN 3 CIRCUITS (CIRCULATOR PUMPS)
- 4 TEMPERATURE SENSORS
- CHRONO-THERMOMETRE
- 6 LANGUAGES
- OPTIONAL GTC MODULE


Heat dissipation through radiators, under floor heating, converters, among others

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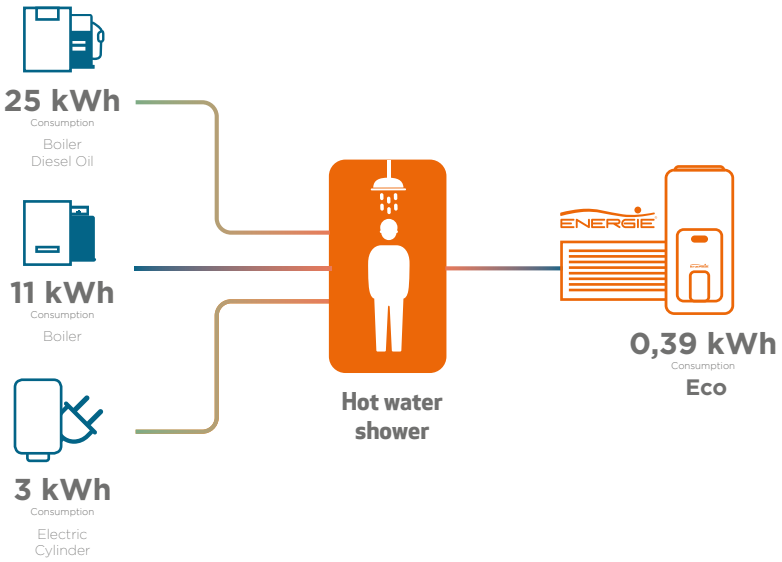
Versatility of the Solar Block application in an installation box.

Energy solutions in conformity with the Paris protocol (2015).

Distribution of consumption to different systems



DID YOU KNOW?

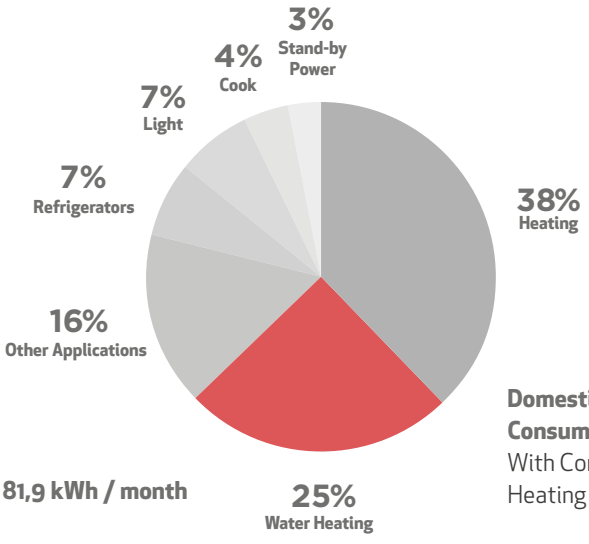
That all thermodynamic solar systems only have one mechanical element that requires electricity? This element is a low energy consumption compressor and is extremely efficient. As the capacity to capture heat from the environment is primarily ensured through solar radiation, it is superior to other equipment with the same goal ensuring saving to the maximum.

The maintenance of the system is practically non-existent and it has high longevity.

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 7 h x 30 days = 81,9 kWh / month
***Example family of 5 people**



Domestic Energy Consumption
With Conventional Heating Equipment.

ECO

Probably the most developed solar water heater in the world

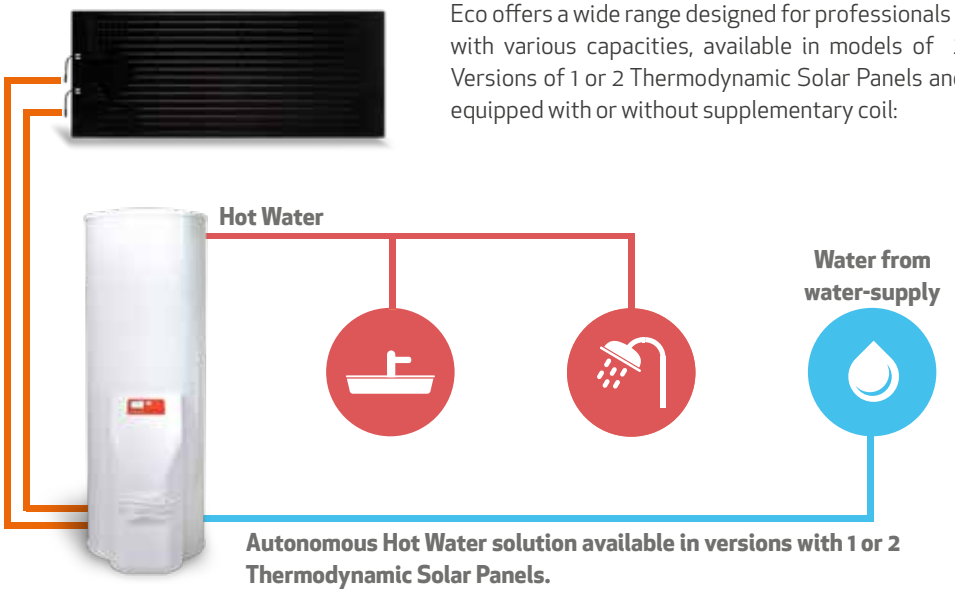
Available with capacities of 200 to 500 litres.
Versions with one or two solar panels, with or without supplementary coil.
Cylinder available in enamelled or stainless steel.

RENEWABLE ENERGY

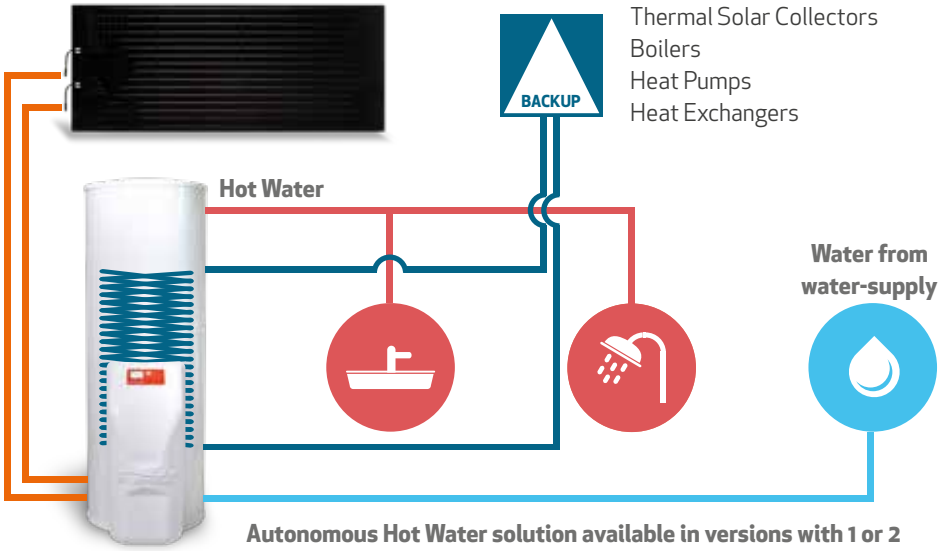
Energy Class A+

DOMESTIC HOT WATER

Eco offers a wide range designed for professionals from this industry, with various capacities, available in models of 200 to 500 litres. Versions of 1 or 2 Thermodynamic Solar Panels and Thermal Storage equipped with or without supplementary coil:



Autonomous Hot Water solution available in versions with 1 or 2 Thermodynamic Solar Panels.



Autonomous Hot Water solution available in versions with 1 or 2 Thermodynamic Solar Panels with supplementary coil.

Choose your model

ECO 888 A A A

1 2 3 *4 *5

1. **Model**
   Eco
2. **Capacity (litres)**
   200, 250, 300, 500 litres Cylinders
3. **Cylinder Material**
   esm (Enamelled)
   i (Stainless)
*4. **2 Solar Panels**
   S
*5. **Supplementary Coil**
   X

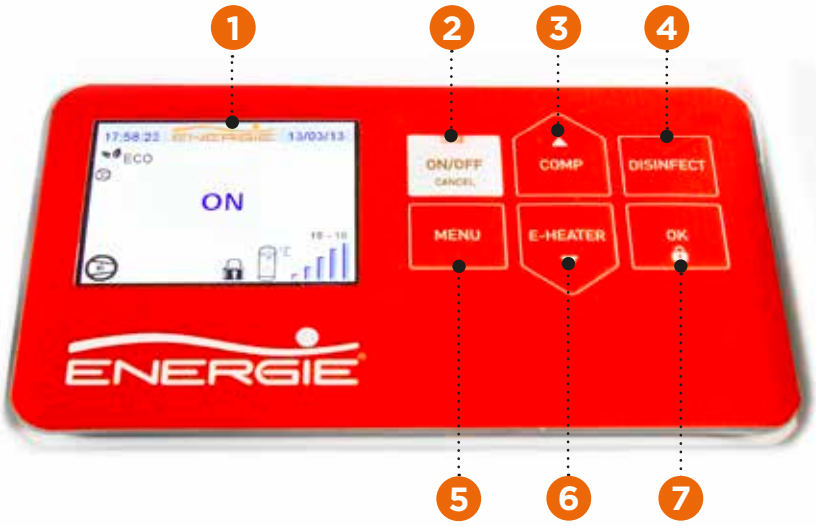
* Optional and when applicable
888 Represents the capacity of equipment

Examples

ECO 300esms Eco with 300 litres capacity with enamelled cylinder and 2 solar panels
ECO 200esm Eco with 200 litres capacity with enamelled cylinder and 1 solar panel
ECO 300ix Eco with 300 litres capacity with stainless steel cylinder, supplementary coil and 1 solar panel
ECO 300isx Eco with 300 litres capacity with stainless steel cylinder, supplementary coil and 2 solar panels

ENERGIE THERMODYNAMIC SOLAR ENERGY

ELECTRONIC CONTROLLER



1. **LCD colour screen**
2. **ON / OFF General**
3. **ON / OFF Compressor**
4. **ON / OFF Anti-legionella**
5. **Menu**
6. **Electrical support** (malfunction)
7. **Execute | Lock / Unlock**

ECO Operating Mode
In the ECO operating mode, the equipment only works as a Thermodynamic Solar System to heat water in the thermal storage. Thus we can have higher efficiency, guaranteeing maximum saving for the user.

AUTO Operating Mode
In the AUTO operating mode, the equipment works as a Thermodynamic Solar System and/or electrical support, there being an automatic management between the operating of the solar system and electrical support, in order to maintain the efficiency of the equipment, thus providing a higher quantity of hot water available.

BOOST Operating mode
In the BOOST operating mode the equipment works with a Thermodynamic Solar System and electrical support simultaneously. This mode allows the user to get hot water in a shorter amount of time.

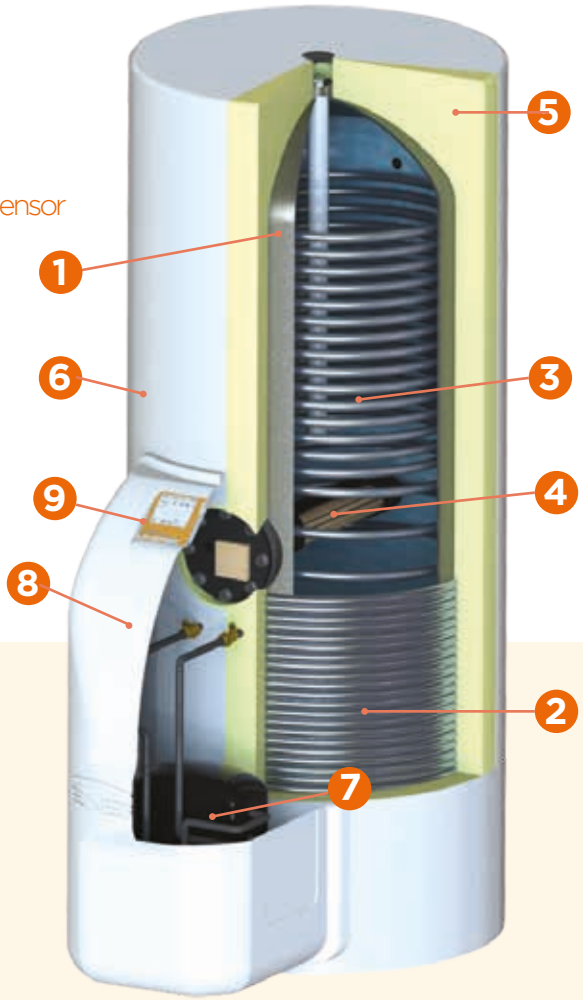
MAXIMUM PRODUCTIVITY WITH SOLAR PERFORMANCE

100% ENVIRONMENTALLY FRIENDLY

- HEAT IS CAPTURED UNDER THE FORM OF SOLAR RADITION, ENVIRONMENTAL TEMPERATURE, RAIN, WIND AND EVEN SNOW.
- THE HEAT PRODUCED ON COLDER DAYS, EVEN AT NIGHT IS SUFFICIENT TO ATTAIN 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 55^{0}C AVAILABLE 24h PER DAY.
- ALMOST NON-EXISTENT MAINTENANCE.
- THE ENERGY CONSUMPTION OF THE EQUIPMENT IS REDUCED DUE TO A SUPER EFFICIENT COMPRESSOR.
- NO DEFROST CYCLE.
- PV FUNCTION.

MAXIMUM EFFICIENCY

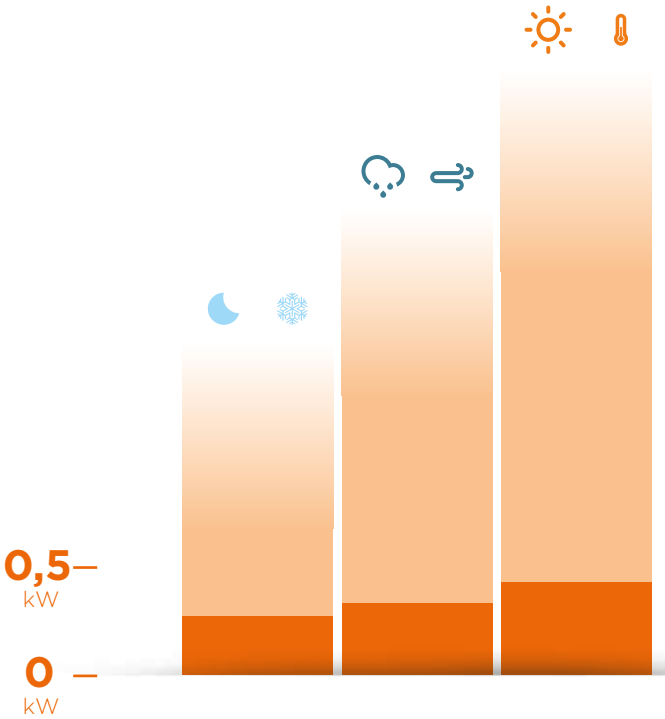
1. DHW Cylinder
2. Condenser
3. Optional Supplementary Coil
4. Ceramic Resistance + Thermostat + Temperature Sensor
5. High Density Insulation
6. Outside Coating
7. Thermodynamic Block
8. Cover
9. Electronic Controller



Versions with 1 or 2 Thermodynamic Solar Panels

Enamelled or stainless steel cylinder

With or without Supplementary Coil



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

WARRANTY 5 YEARS CYLINDER

WARRANTY 10 YEARS SOLAR PANEL

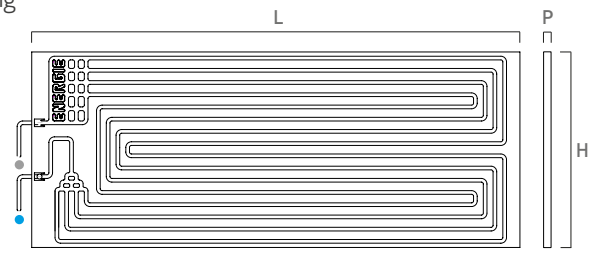
Check warranty conditions

Thermodynamic Solar System
domestic hot water

Specifications		Eco 200esm	Eco 250i Eco 250esm	Eco 300i Eco 300esm
Nominal Capacity	L	200	250	300
Thermal Power (Med/Max)	W	1690/2900	1690/2900	1690/2900
Power Consumption (Med/Max)	W	390/550	390/550	390/550
Temperature (Factory Setpoint)	°C	53	53	53
Maximum Temperature	°C	80	80	80
Max. Amount of water at 40°C in a run (St./En.)	L	-/242	317/321	369/374
Maximum Operation Pressure	bar	7	7	7
Number of Panels		1	1	1
Liquid Line	Pol.	1/4	1/4	1/4
Suction Line	Pol.	3/8	3/8	3/8
Electrical back-up power	W	1500	1500	1500
Gross Weight of Cylinder (St./En.)	Kg	-/73	62/83	74/95
Electrical Supply	V/Hz	230/50	230/50	230/50

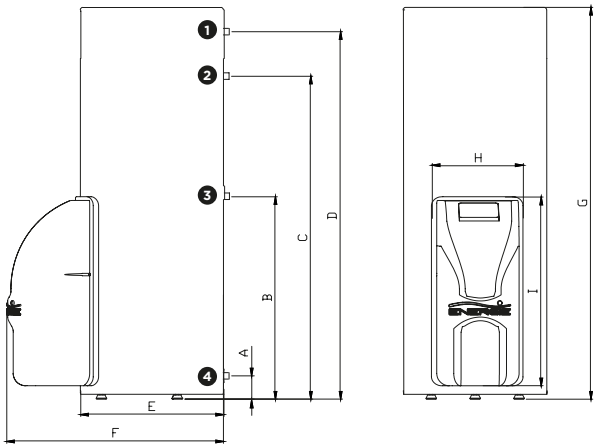
Equipment with fluid pre-charge
Easy Install
Economic Solar Solution

Technical Drawing



L-2000mm
H-800mm
P-20mm

● Steam Line
● Liquid Line



Dimensions (mm)	Eco 200esm	Eco 250i Eco 250esm	Eco 300i Eco 300esm
A	92	89	92
B	830	830	772
C	1161	1333/1341	1172
D	1289	1467	1315
E	580	580	650
F	880	880	950
G	1364	1545/1543	1415
H	370	370	370
I	765	765	765

1 (Hot Water)	3/4" Male
2 (PT Valve) *	1/2" Female
3 (Recirculation)	3/4" Male
4 (Cold Water)	3/4" Male
5 (Coil Inlet)	-
6 (Coil Outlet)	-

*Optional

With flares valves on the solar panel and on the thermodynamic group.
With dielectric threads for water connections enameled cylinder (esm).

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Thermodynamic Solar System
domestic hot water

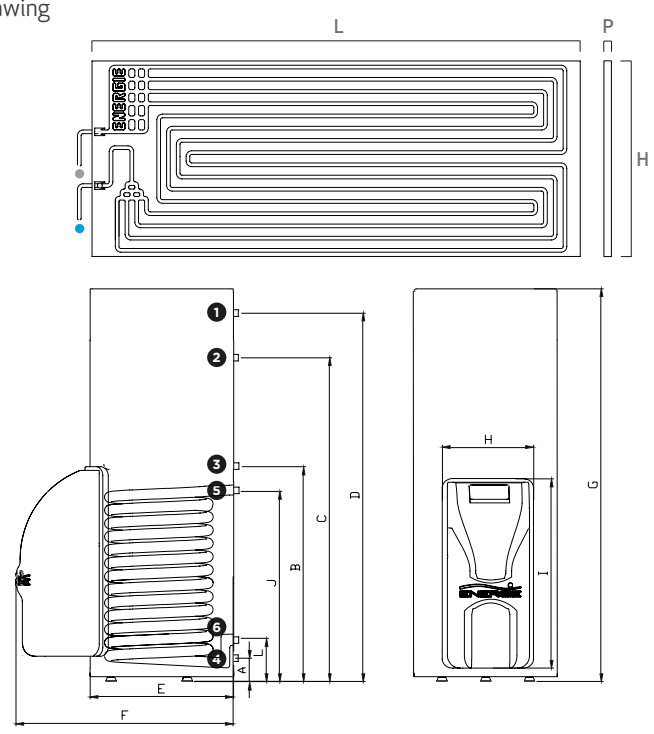
Specifications		Eco 250ix	Eco 300ix
Nominal Capacity	L	250	300
Thermal Power (Med/Max)	W	1690/2900	1690/2900
Power Consumption (Med/Max)	W	390/550	390/550
Temperature (Factory Setpoint)	°C	53	53
Maximum Temperature	°C	80	80
Max. Amount of water at 40°C in a run (St./En.)	L	308	360
Maximum Operation Pressure	bar	7	7
Number of Panels		1	1
Liquid Line	Pol.	1/4	1/4
Suction Line	Pol.	3/8	3/8
Electrical back-up power	W	1500	1500
Gross Weight of Cylinder (St./En.)	Kg	69	81
Electrical Supply	V/Hz	230/50	230/50

Allows the connection of another heat source
Easy Install
Equipment with fluid pre-charge

Technical drawing

L-2000mm
H-800mm
P-20mm

- Steam line
- Liquid line



With flares valves on the solar panel and on the thermodynamic group.

Dimensions (mm)	Eco 250ix	Eco 300ix
A	89	92
B	830	772
C	1333	1172
D	1469	1315
E	580	650
F	880	950
G	1545	1415
H	370	370
I	765	765
J	696	621
L	205	221

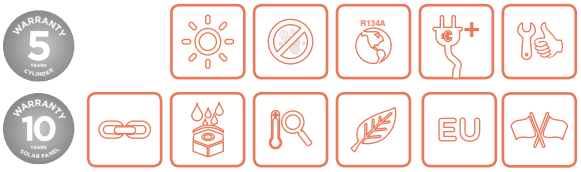
1 (Hot Water)	3/4" Male
2 (PT Valve)*	1/2" Female
3 (Recirculation)	1/2" Female
4 (Cold Water)	3/4" Male
5 (Coil Inlet)	1" Male
6 (Coil Outlet)	1" Male

* Optional

Thermodynamic Solar System
domestic hot water

Specifications		Eco 250is	Eco 300is Eco 300esms	Eco 500is
Nominal Capacity	L	250	300	455
Thermal Power (Med/Max)	W	2800/4550	2800/4550	2800/4550
Power Consumption (Med/Max)	W	595/890	595/890	595/890
Temperature (Factory Setpoint)	ºC	53	53	53
Maximum Temperature	ºC	80	80	80
Max. Amount of water at 40ºC in a run (St./En.)	L	317	369/374	537
Maximum Operation Pressure	bar	7	7	7
Number of Panels		2	2	2
Liquid Line	Pol.	3/8	3/8	3/8
Suction Line	Pol.	1/2	1/2	1/2
Electrical back-up power	W	1500	1500	2200
Gross Weight of Cylinder (St./En.)	Kg	62	74/95	110
Electrical Supply	V/Hz	230/50	230/50	230/50

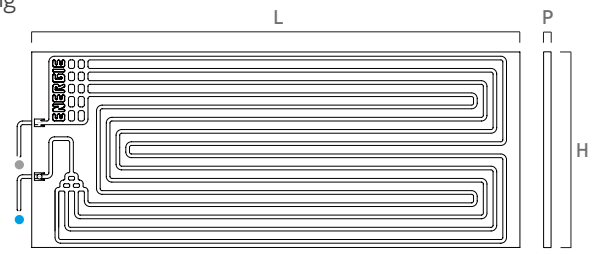
Superior Performance
Equipment with fluid pre-charge
Larger number of users



Technical Drawing

L-2000mm
H-800mm
P-20mm

● Steam line
● Liquid line



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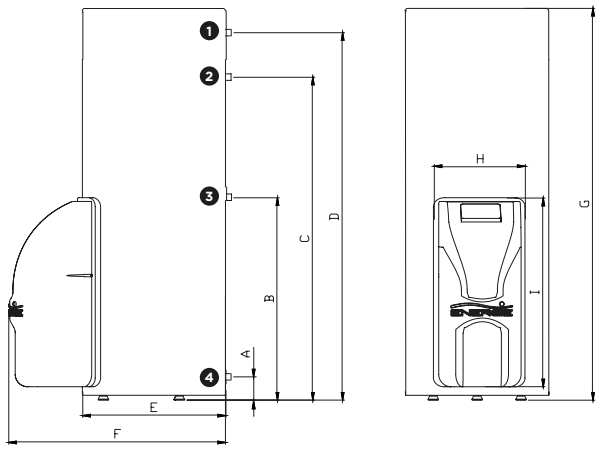


Dimensions (mm)	Eco 250is	Eco 300is Eco 300esms	Eco 500is
A	89	92	92
B	830	772	772
C	1333	1172	1784
D	1469	1315	1927
E	580	650	650
F	880	950	950
G	1545	1415	1990
H	370	370	370
I	765	765	765

	Eco 250is 300is / 300esms	Eco 500is
1 (Hot Water)	3/4" Male	1" Male
2 (PT Valve) *	1/2" Female	1/2" Female
3 (Recirculation)	3/4" Male	3/4" Male
4 (Cold Water)	3/4" Male	1" Male
5 (Coil Inlet)	-	-
6 (Coil Outlet)	-	-

*Optional

Includes Liquid Distributor.
With dielectric threads for water connections enameled cylinder (esm).

Thermodynamic Solar System
domestic hot water

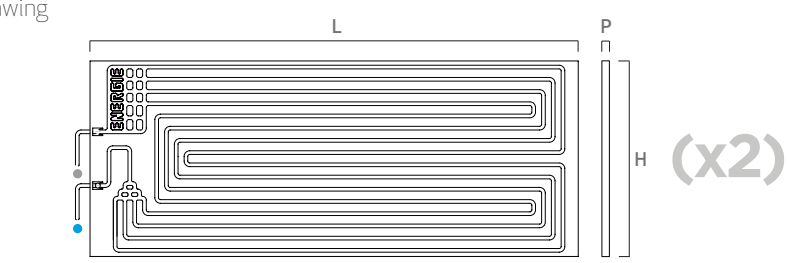
Specifications		Eco 250isx	Eco 300isx	Eco500isx
Nominal Capacity	L	250	300	455
Thermal Power (Med/Max)	W	2800/4550	2800/4550	2800/4550
Power Consumption (Med/Max)	W	595/890	595/890	595/890
Temperature (Factory Setpoint)	°C	53	53	53
Maximum Temperature	°C	80	80	80
Max. Amount of water at 40°C in a run (St./En.)	L	308	360	525
Maximum Operation Pressure	bar	7	7	7
Number of Panels		2	2	2
Liquid Line	Pol.	3/8	3/8	3/8
Suction Line	Pol.	1/2	1/2	1/2
Electrical back-up power	W	1500	1500	2200
Gross Weight of Cylinder (St./En.)	Kg	69	81	121
Electrical Supply	V/Hz	230/50	230/50	230/50

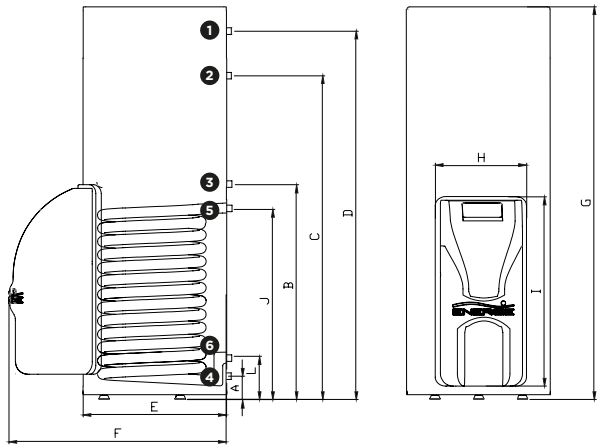
Superior Performance
Equipment with fluid pre-charge
Larger number of users
Allows the connection of another heat source

Technical Drawing

L-2000mm
H-800mm
P-20mm

- Steam line
- Liquid line





Includes Liquid Distributor.

Dimensions (mm)	Eco 250isx	Eco 300isx	Eco 500isx
A	89	92	92
B	830	772	772
C	1333	1172	1784
D	1469	1315	1927
E	580	650	650
F	880	950	950
G	1545	1415	1990
H	370	370	370
I	765	765	765
J	696	621	1515
L	205	221	625

	Eco250isx/300isx	Eco500isx
1 (Hot water)	3/4" Male	1" Male
2 (PT valve)*	1/2" Female	1/2" Female
3 (Recirculation)	1/2" Female	1/2" Female
4 (Cold water)	3/4" Male	1" Male
5 (Coil Inlet)	1" Male	1" Male
6 (Coil Outlet)	1" Male	1" Male

*Optional

Accessories included in the equipment

Steel profiles to put up the panel (small and large sizes)

Safety group

Pressure reducing valve and manometer

M6 Screws + washers + panel setting rawlplug

List of equipment from the range

Model	No. of Panels	Enamelled	Stainless	Extra Coil	Litres	No. of People
Eco 200esm	1	x			200	4
Eco 250esm	1	x			250	4
Eco 300esm	1	x			300	5
Eco 250i	1		x		250	4
Eco 300i	1		x		300	5
Eco 250ix	1		x		250	4
Eco 300ix	1		x		300	5
Eco 300esms	2	x			300	6
Eco 250is	2		x		250	5
Eco 300is	2		x		300	6
Eco 500is	2		x		455	9
Eco 250isx	2		x		250	5
Eco 300isx	2		x		300	6
Eco 500isx	2		x		455	9

ECOTOP

Probably the most developed solar water heater in the world

Available with capacities of 100 to 250 litres.
Version with one solar panel, with or without supplementary coil.
Cylinder available in enamelled and stainless steel.

RENEWABLE ENERGY

Energy Class A+

DOMESTIC HOT WATER

ENERGIE
THERMODYNAMIC SOLAR ENERGY

Thermodynamic Solar System
domestic hot water

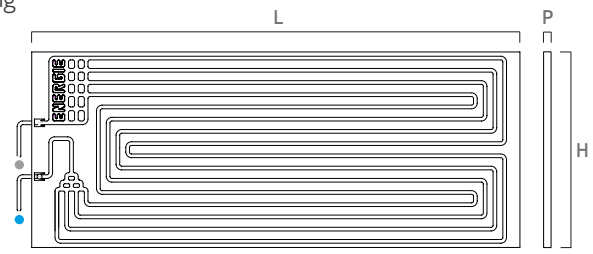
Specifications		Ecotop 100esm	Ecotop 200i	Ecotop 250i
Nominal Capacity	L	100	200	250
Thermal Power (Med/Max)	W	1250/2100	1250/2100	1250/2100
Power Consumption (Med/Max)	W	350/600	350/600	350/600
Temperature (Factory Setpoint)	°C	53	53	53
Maximum Temperature	°C	80	80	80
Max. Amount of water at 40°C in a run (St./En.)	L	120	247	343
Maximum Operation Pressure	bar	7	7	7
Number of Panels		1	1	1
Liquid Line	Pol.	1/4	1/4	1/4
Suction Line	Pol.	3/8	3/8	3/8
Electrical back-up power	W	1500	1500	1500
Gross Weight of Cylinder (St./En.)	Kg	5	87	95
Electrical Supply	V/Hz	230/50	230/50	230/50

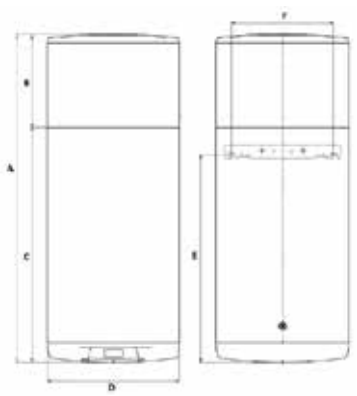
Equipment with fluid pre-charge
Easy Install
Economic Solar Solution

Technical Drawing

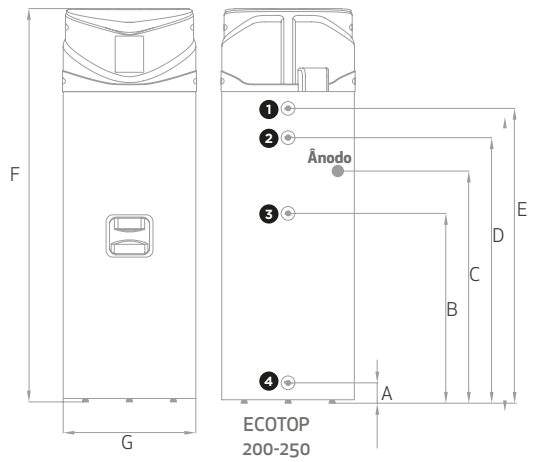
L-2000mm
H-800mm
P-20mm

● Steam Line
● Liquid Line





ECO100



ECOTOP
200-250

Dimensions (mm)	Eco100esm	Eco200i	Eco 250i
A	1275	89	89
B	420	830	830
C	855	1015	1015
D	520	1161	1341
E	724	1289	1469
F	450	1720	1900
G	---	580	580

1 (Hot Water)	3/4" Male
2 (PT Valve) *	1/2" Female
3 (Recirculation)	3/4" Male
4 (Cold Water)	3/4" Male
5 (Coil Inlet)	-
6 (Coil Outlet)	-

*Optional

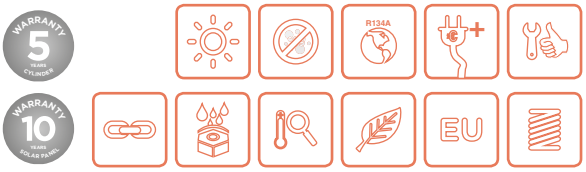
With flares valves on the solar panel and on the thermodynamic group.
With dielectric threads for water connections enameled cylinder (esm).

ENERGIE
THERMODYNAMIC SOLAR ENERGY

Thermodynamic Solar System
domestic hot water

Specifications		Ecotop 200ix	Ecotop 250ix
Nominal Capacity	L	195	245
Thermal Power (Med/Max)	W	1250/2100	1250/2100
Power Consumption (Med/Max)	W	350/600	350/600
Temperature (Factory Setpoint)	ºC	53	53
Maximum Temperature	ºC	80	80
Max. Amount of water at 40ºC in a run (St./En.)	L	240	337
Maximum Operation Pressure	bar	7	7
Number of Panels		1	1
Liquid Line	Pol.	1/4	1/4
Suction Line	Pol.	3/8	3/8
Electrical back-up power	W	1500	1500
Gross Weight of Cylinder (St./En.)	Kg	94	107
Electrical Supply	V/Hz	230/50	230/50

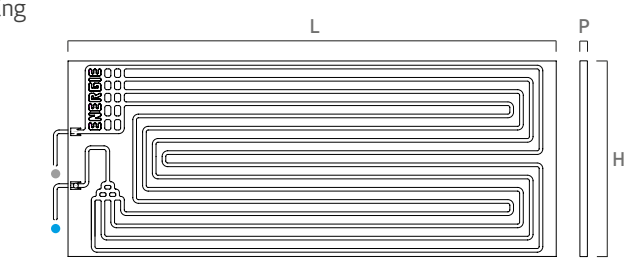
Allows the connection of another heat source
Easy Install
Equipment with fluid pre-charge

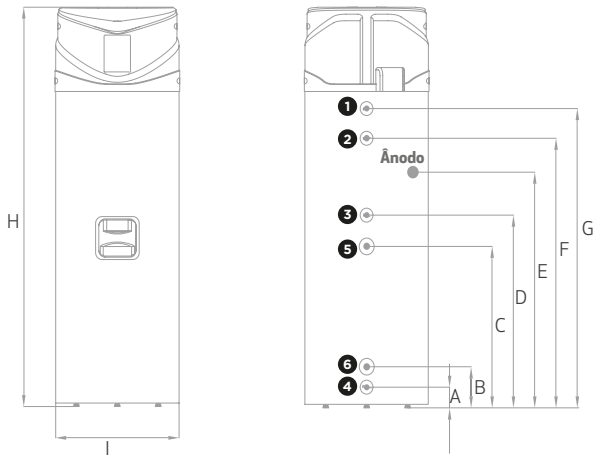


Technical drawing

L-2000mm
H-800mm
P-20mm

- Steam line
- Liquid line





Dimensions (mm)	Eco 200ix	Eco 250ix
A	89	89
B	177	177
C	696	696
D	830	830
E	1015	1015
F	1161	1341
G	1289	1469
H	1720	1900
I	580	580

1 (Hot Water)	3/4" Male
2 (PT Valve)*	1/2" Female
3 (Recirculation)	1/2" Female
4 (Cold Water)	3/4" Male
5 (Coil Inlet)	1" Male
6 (Coil Outlet)	1" Male

*Optional

With flares valves on the solar panel and on the thermodynamic group.

Accessories included in the equipment

Steel profiles to put up the panel (small and large sizes)

Safety group

Pressure reducing valve and manometer

M6 Screws + washers + panel setting rawlplug

List of equipment from the range

Model	No. of Panels	Enameled	Stainless	Extra Coil	Litres	No. of People
Ecotop 100esm	1	x			100	2
Ecotop 200i	1		x		200	4
Ecotop 250i	1		x		250	5
Ecotop 200ix	1		x		195	4
Ecotop 250ix	1		x		245	5

SOLAR BOX
RETRO FITS TO THE EXISTING CYLINDER

Check warranty conditions

- IDENTICAL FUNCTION PRINCIPLE OF AN ECO
- THE SOLAR BOX CAN BE HUNG ON THE WALL OR BE PLACED ON THE FLOOR
- VERY COMPACT UNIT
- LOW CONSUMPTION
- ADAPTS TO ALL KINDS OF CYLINDERS
- EQUIPMENT WITH FLUID PRE-CHARGE R134A
- AVAILABLE IN MODELS OF 1 OR 2 TERMODYNAMIC SOLAR PANELS

KEEP YOU DHW CYLINDER
AND TURN IT INTO AN
EFFICIENT SOLAR SYSTEM

HOT WATER DAY & NIGHT,
HAIL, RAIN, WIND OR SHINE

SAVINGS UP TO

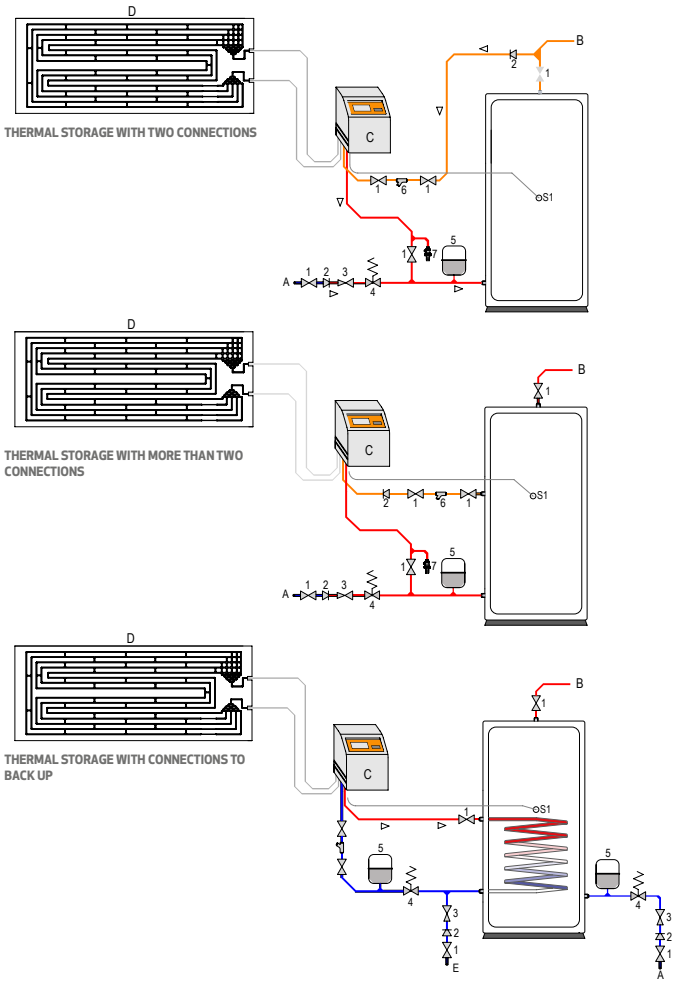
80%

ENERGIE
THERMODYNAMIC SOLAR ENERGY

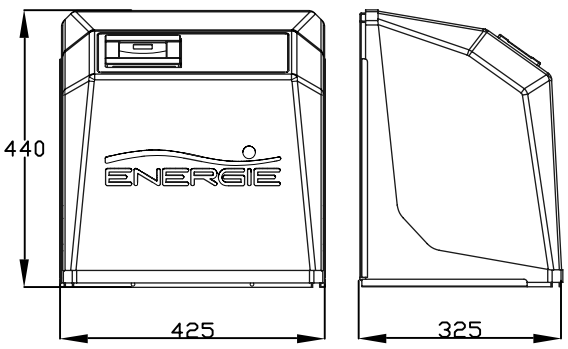
Thermodynamic Solar System
domestic hot water

Diagram

Caption	
1	Sectioning Valve
2	Check Valve
3	Pressure Reducer
4	Safety Group
5	Expansion Vase
6	Filter
7	Discharge Valve
A	Network
B	Hot water Outlet
C	SolarBox
D	Thermodynamic Panel
E	Network
S1	Temperature Sensor



Technical drawing

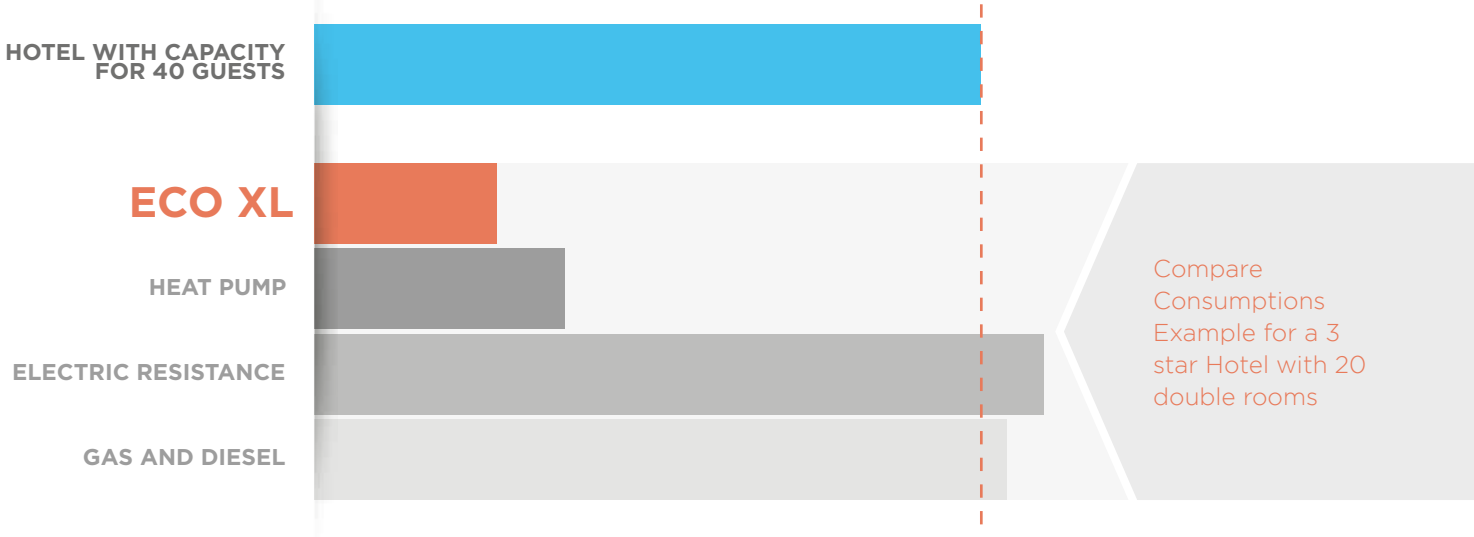


Specifications		1 Panel	2 Panels
Provided Thermal Powera (Méd./Máx.)	W	1690/2900	2800/4550
Power Consumption (Méd./Máx.)	W	390/550	595/890
Electrical Supply	V/Hz	230/50-60	230/50-60
Cooling Fluid	-/kg	R134a / 0,8	R134a / 1,0
Maximum Temperature	ºC	55	55
Maximum Operation Pressure (Water)	bar	7	7
Hydraulic Connection (Inlet/Outlet)	Pol.	1/2 | 1/2	1/2 | 1/2
Weight (Solarbox/Panel)	kg	23,5 / 8	23,5 / 2 x 8
Flare Connections (Suction/Liquid)	Pol.	3/8 | 1/4	1/2 | 3/8
Energy Class | Tapping Profile		A | L	A | XL

Includes hydraulic filter and anti-vibration system

Energy Diagram

Energy needed to raise the temperature of 1000L of water from 15°C to 55°C.
Calculation based on norm EN 16147.



ECO XL

Thermodynamic Solar Solution to heat domestic water for industrial use

Equipment with 6 to 40 solar panels.
Capacities of 1000 to 6000 litres.
Stainless steel cylinders AISI316.

DOMESTIC HOT WATER INDUSTRIAL USE

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

THE MOST EVOLVED INDUSTRIAL SOLUTION

- POSSIBILITY OF ADAPTING THE EXISTING INSTALLATION WITHOUT THE NEED FOR CIVIL CONSTRUCTION WORKS.
- HEAT IS CAPTURED THROUGH SOLAR RADIATION, ENVIRONMENT TEMPERATURE, RAIN, WIND AND EVEN SNOW.
- THE HEAT PRODUCED ON COLDER DAYS, EVEN AT NIGHT IS SUFFICIENT TO ATTAIN THE WATER TEMPERATURE DESIRED.
- 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.

MAXIMUM EFFICIENCY

1. Magnesium Anode
2. High density insulation
3. DHW Cylinder
4. Water/water serpentine heat exchanger
5. Finned tube heat exchanger
6. Outside coating

Versions with 1 or 2 Cylinders

Stainless Steel AISI316 Cylinders with finned tube heat exchanger

With or without water/water heat exchanger

Equipment from 6 up to 40 Thermodynamic Solar Panels

Capacities from 1000 up to 6000 litres

- DOUBLE WALL CONDENSERS
- 3rd GENERATION SOLAR ENERGY
- SOLAR HOT WATER UP TO 60ºC AVAILABLE
- ALMOST NON-EXISTENT MAINTENANCE
- UP TO 3 CYCLES OF HOT WATER REPLACEMENT SYSTEM CAPACITY PER DAY

WARRANTY 5 YEARS CYLINDER

WARRANTY 10 YEARS SOLAR PANEL

Check warranty conditions

ENERGIE THERMODYNAMIC SOLAR ENERGY

Thermodynamic Solar Systems for Large Volumes of Domestic Hot Water with a Cylinder

ECO 8888 I 88 and ECO 8888 IX 88
1000 to 2000

1 Stainless Steel Cylinder with Simple Flange
1 High Efficiency Finned Tube Heat Exchanger
Optional Water/Water Serpentine Heat Exchanger
1 Solar Block

Model	Litres	Solar Block
Eco 1000	1000	6
Eco 1500	1500	12
Eco 2000	2000	12, 16

8888 Represents the capacity of the equipment
88 Represents the number of panels

Thermodynamic Solar Systems for Big Volumes of Domestic Hot Water with two Cylinders

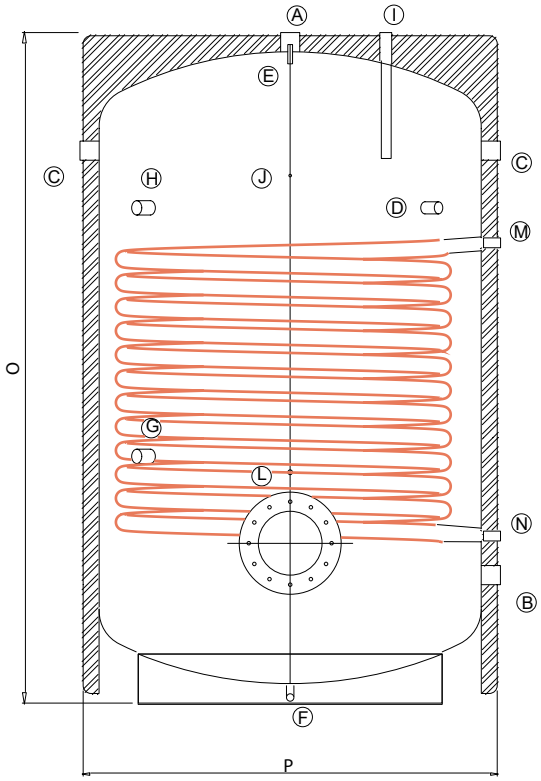
ECO 8888 ID 88 and ECO 8888 IXD 88
2000 to 6000

2 Stainless Steel Cylinders with Simple Flange
2 High Efficiency Finned Tube Heat Exchangers
Optional Water/Water Serpentine Heat Exchanger
1 Solar Block

Model	Litres	Solar Block
Eco 2000	2x1000	12, 16
Eco 3000	2x1500	16, 28
Eco 4000	2x2000	28
Eco 6000	2x3000	40

8888 Represents the capacity of the equipment
88 Represents the number of panels

STAINLESS Cylinder



Letter	1000 Inox	1500 Inox	2000 Inox	3000 Inox
A	1"1/4 F	1"1/2 F	2" F	2" F
B	1"1/4 F	1"1/2 F	2"F	2"F
C	1"1/4 F	1"1/2 F	2"F	2" F
D	1"1/4 F	1"1/4 F	1"1/4 F	1"1/4 F
E	1/2"F	1/2"F	1/2"F	1/2"F
F	1"F	1"F	1" F	1" F
G	1/2"F	1/2"F	1/2" F	1/2" F
H	1/2"F	1/2"F	1/2"F	1/2" F
I	1" F	1"1/4 F	1"1/4 F	1"1/4 F
J	1/2"F	1/2"F	1/2"F	1/2"F
L	1/2"F	1/2"F	1/2"F	1/2" F
M	1"1/4 F	1"1/4 F	1"1/4 F	1"1/4 F
N	1"1/4 F	1"1/4 F	1"1/4 F	1"1/4 F
O	2010mm	2100mm	2160mm	2300mm
P	930mm	1140mm	1300mm	1500mm

Nota Technical drawing of the Solar Block on page 62

DURATION OF THE HEATING CYCLE

Average period of time necessary for the **total volume** of water in the equipment to reach the desired temperature

Model		Eco 1000	Eco 1500	Eco 2000	Eco 3000	Eco 4000	Eco 6000
Solar Panels	Nº.	6	12	12 / 16	16 / 28	28	40
Nominal Capacity	Litres	1000	1500	2000	3000	4000	6000
Maximum Thermal Power	W	7500	16580	16580 / 24210	24210 / 38220	38220	54600
Power Consumption	W	1230	2010	2010 / 3210	3210 / 5650	5650	8450
Thermal storage	Unit.	1	1	1 ou 2	1 ou 2	2	2
Users*		22	34	45	68	90	135

*Considering an average consumption of 50 litres / person / day

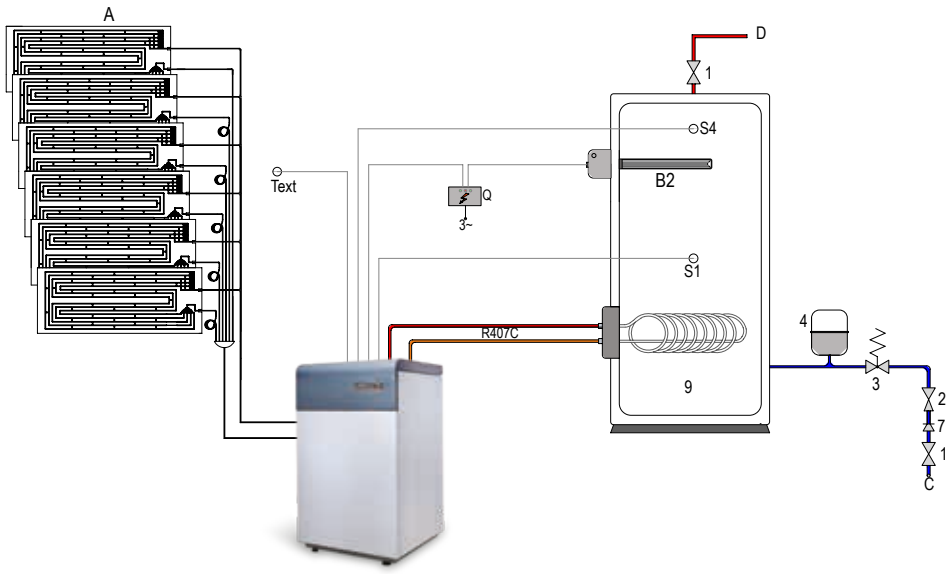
Stainless Steel Cylinders

Name	Nominal Capacity	Cylinder	N. Panels	N. Flanges	Coil	Electrical Suply*
Eco 1000I6	1000	Stainless	6	1	No	S or T
Eco 1000IX6	1000	Stainless	6	1	Yes	S or T
Eco 1500I12	1500	Stainless	12	1	No	S or T
Eco 1500IX12	1500	Stainless	12	1	Yes	S or T
Eco 2000I12	2000	Stainless	12	1	No	S or T
Eco 2000IX12	2000	Stainless	12	1	Yes	S or T
Eco 2000ID12	2 × 1000	Stainless	12	1	No	S or T
Eco 2000IXD12	2 × 1000	Stainless	12	1	Yes**	S or T
Eco 2000I16	2000	Stainless	16	2	No	S or T
Eco 2000IX16	2000	Stainless	16	2	Yes	S or T
Eco 2000ID16	2 × 1000	Stainless	16	1	No	S or T
Eco 2000IXD16	2 × 1000	Stainless	16	1	Yes**	S or T
Eco 3000I16	3000	Stainless	16	2	No	S or T
Eco 3000IX16	3000	Stainless	16	2	Yes	S or T
Eco 3000ID16	2 × 1500	Stainless	16	1	No	S or T
Eco 3000IXD16	2 × 1500	Stainless	16	1	Yes**	S or T
Eco 3000I28	3000	Stainless	28	2	No	T
Eco 3000IX28	3000	Stainless	28	2	Yes	T
Eco 3000ID28	2 × 1500	Stainless	28	1	No	T
Eco 3000IXD28	2 × 1500	Stainless	28	1	Yes**	T
Eco 4000ID28	2 × 2000	Stainless	28	1	No	T
Eco 4000IXD28	2 × 2000	Stainless	28	1	Yes**	T
Eco 6000ID40	2 × 3000	Stainless	40	1	No	T
Eco 6000IXD40	2 × 3000	Stainless	40	1	Yes**	T

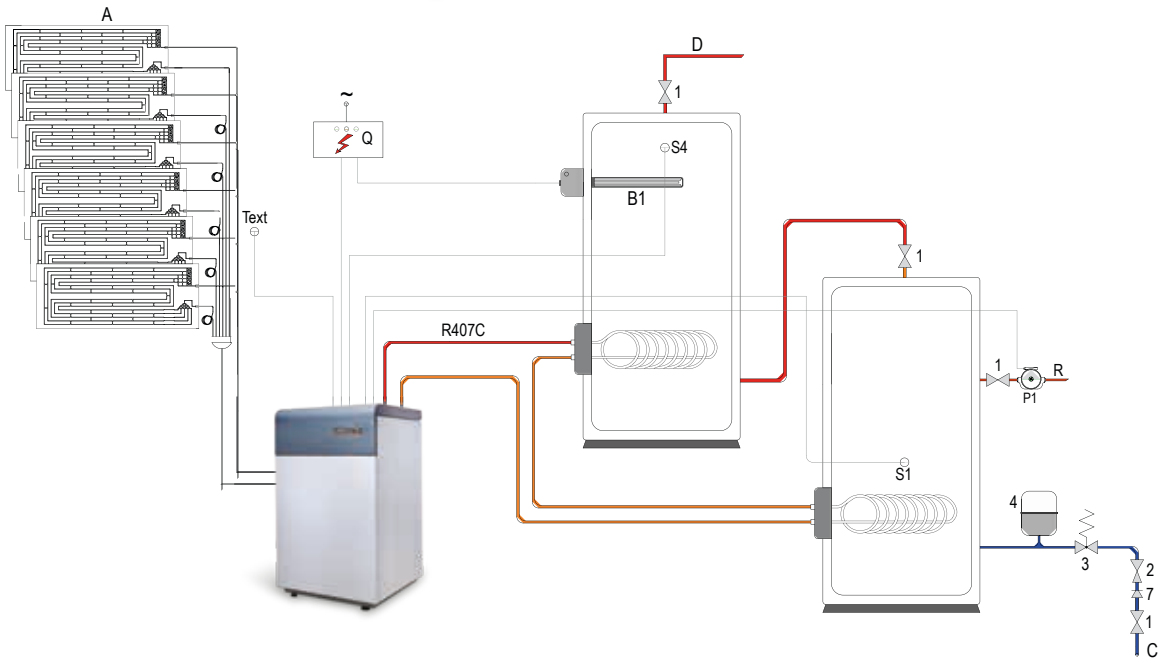
* The suffix Single-Phase (S) or Three-Phase (T) is added at the end of each designation.
** Only one of the heaters has a serpentine.

The Thermodynamic Solar Solutions aimed at heating domestic water for industrial use have enough versatility in order for their application to meet the needs of the case at hand.

ECO XL
Standard Installation
with Electrical Support



ECO XL
Installation with
2 Cylinders
in Series with
Electrical Support



1	Shut-off Valve	7	Check Valve (non-return)	D	Hot Water Outlet	Text	Outside Thermostat
2	Pressure Reducer	9	Thermal Storage	P1	Circulating Pump 1	B1	Resistance Kit (Support)
3	Security Valve	A	Thermodynamic Solar Panels	S1	Temperature Sensor S1	B2	Resistance Kit (Support)
4	Expansion Valve	C	Cold Water Inlet	S4	Temperature Sensor S4	Q	Control Box

Choose your model

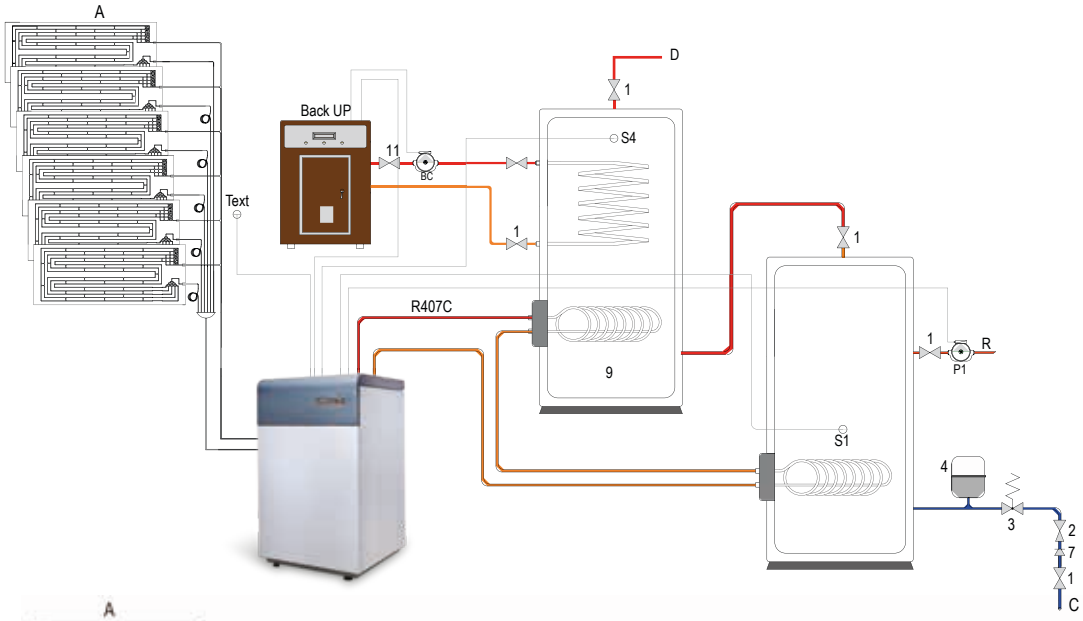
ECO	8888	A	A	A	88	A
1	2	3	*4	*5	6	7

Example

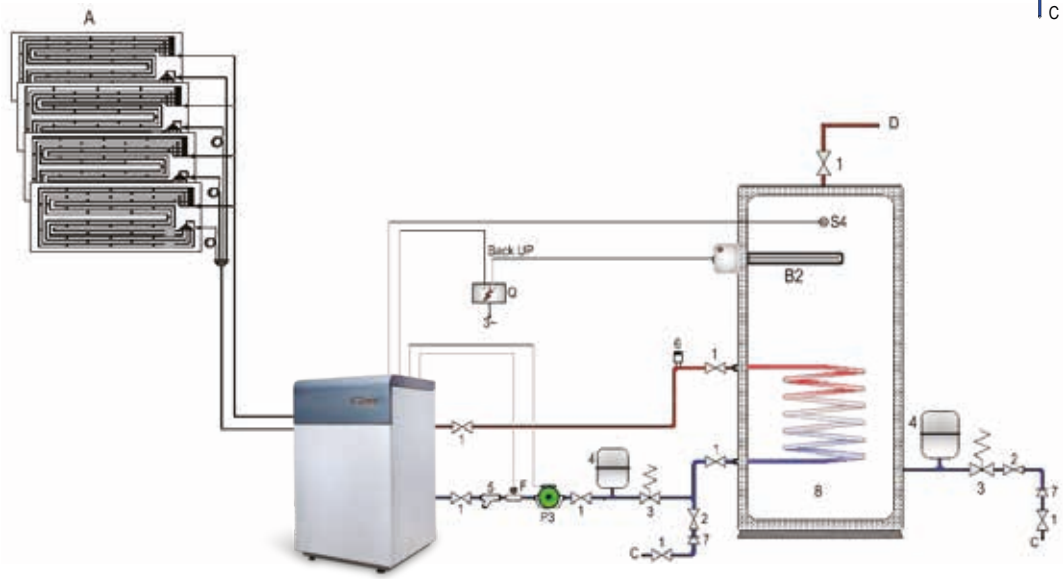
ECO 3000 IXD 28 T ECO of 3000 litres capacity with 2 Stainless steal cylinders with a high productivity exchanger, 28 panels, three-phase version.

It is also in thinking about the needs of the professionals in this sector that we make an ample range of equipment available so that any new or existing installation is no longer a challenge and is simplified. The focus is always on economy and efficiency.

ECO XL
Installation with
2 Cylinders
in Series with Boiler
support



ECO XL
Use of Existing Cylinder



1	Shut-off Valve	7	Check Valve (non-return)	D	Hot Water Outlet	BC	Boiler Circulator Pump
2	Pressure Reducer	9	Thermal Storage	S1	Temperature Sensor S1	CA	Boiler (Support)
3	Security Valve	A	Thermodynamic Solar Panels	S4	Temperature Sensor S4		
4	Expansion Valve	C	Cold Water Inlet	Text	Outside Thermostat		

1 Model
Eco XL

2 Capacity (litres)
1000, 1500, 2000, 3000, 4000 ou 6000 litres

3 Cylinder Material
i (Stainless)

***4 Supplementary Coil (Stainless 6 Cylinders)**
X (optional)

***5 2 Cylinders**
D (Available in models Eco 2000, Eco 3000, Eco 4000 e Eco 6000) (optional)

6 Number of Solar Panels that make up the system

7 S Single-phase
T Three-phase

* Optional and when applicable
8888 Represents the capacity of equipment

Advantages in acquiring a Solar Block for Central Heating:

- LOW CO_2 EMISSIONS
- WITH ELECTRICITY PRICES GOING UP ALL THE TIME, THE RIGHT INVESTMENT IS IN EFFICIENCY TO OBTAIN MAXIMUM SAVING
- RENEWABLE ENERGY IN YOUR HOME
- MAKE YOUR HOME ENVIRONMENTALLY FRIENDLY

Comparison of primary energy consumption between different heating systems

RENEWABLE ENERGY

SOLAR BLOCK

Thermodynamic Solar Solution for central heating

Equipment with 6 to 40 solar panels
Area to be heated from 90 to 450 m²
High quality stainless steel plate heat exchanger

CENTRAL HEATING

COMFORT, CONVENIENCE WITH **MAXIMUM ECONOMY**

WARRANTY 10 YEARS SOLAR PANEL

Check warranty conditions

- SUPER EFFICIENT ENVIRONMENT HEATING AT LOW.
- NON-EXISTENT PROGRAMMED MAINTENANCE.
- POSSIBILITY OF JOINING ALL HOUSE HEATING EQUIPMENT INTO JUST ONE SOLUTION.
- POSSIBILITY OF ALTERNATING BETWEEN ENVIRONMENT HEATING IN THE COLDER SEASONS AND SWIMMING-POOL HEATING IN THE WARMER SEASONS.
- ABSOLUTE GUARANTEE OF PRODUCTION OF HOT WATER FOR HEATING AT 55°C DURING THE WINTER.
- HIGHLY EFFICIENT SCROLL COMPRESSOR.
- HIGH QUALITY STAINLESS STEEL PLATES EXCHANGER.
- FREE OF DEFROST CYCLES.
- SMALL DIMENSION INDOOR UNIT.
- CENTRAL HEATING WITHOUT CHIMNEYS AND BURNT GASES, TOTALLY ENVIRONMENTALLY FRIENDLY.
- WORKS WITH UNDERFLOOR HEATING, RADIATORS, CONVECTORS OR FAN COILS.
- ELECTRONIC EXPANSION VALVE.

MAXIMUM EFFICIENCY

Note: Technical drawing of Solar Block on page 62
Simplified representative diagram

Thermodynamic Solar System
central heating

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 Min.	W	1230	2010	3210	5650	8450
Water Flow	m³/h	0,7	1,0	1,5	3,0	5,0
Pressure Drop	kPa	3,0	9	7	11	36
Electrical Supply		1~/ 230V / 50 Hz or 3~/ 400V / 50 Hz			3~/ 400V / 50 Hz	
Protection (M/T)*	A	16/6	25/10	2x16/16	20	25
Hydraulic Connections	Pol.	1	1	1	1	1
Block Gross Weight	kg	48	96	128	210	320

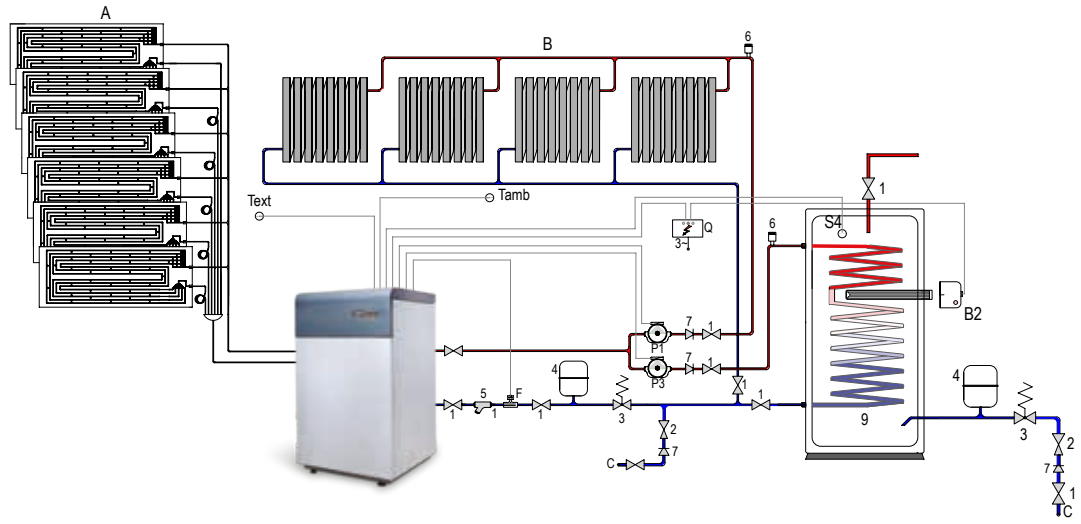
*Magnetothermic Protection Switch (S, for the Single-Phase version and T for the Three-Phase version) to be fitted by the installer.

Model	N. Panels	Area to be heated*	Cylinder	Electrical Supply
Solar Block 6	6	90 m²	-	230V or 400V
Solar Block 12	12	150 m²	-	230V or 400V
Solar Block 16	16	220 m²	-	230V or 400V
Solar Block 28	28	300 m²	-	400V
Solar Block 40	40	450 m²	-	400V
Solar Block 6 Plus	6	90 m²	200	230V or 400V
Solar Block 12 Plus	12	150 m²	300	230V or 400V
Solar Block 16 Plus	16	220 m²	300	230V or 400V
Solar Block 28 Plus	28	300 m²	500	400V
Solar Block 40 Plus	40	450 m²	500	400V

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

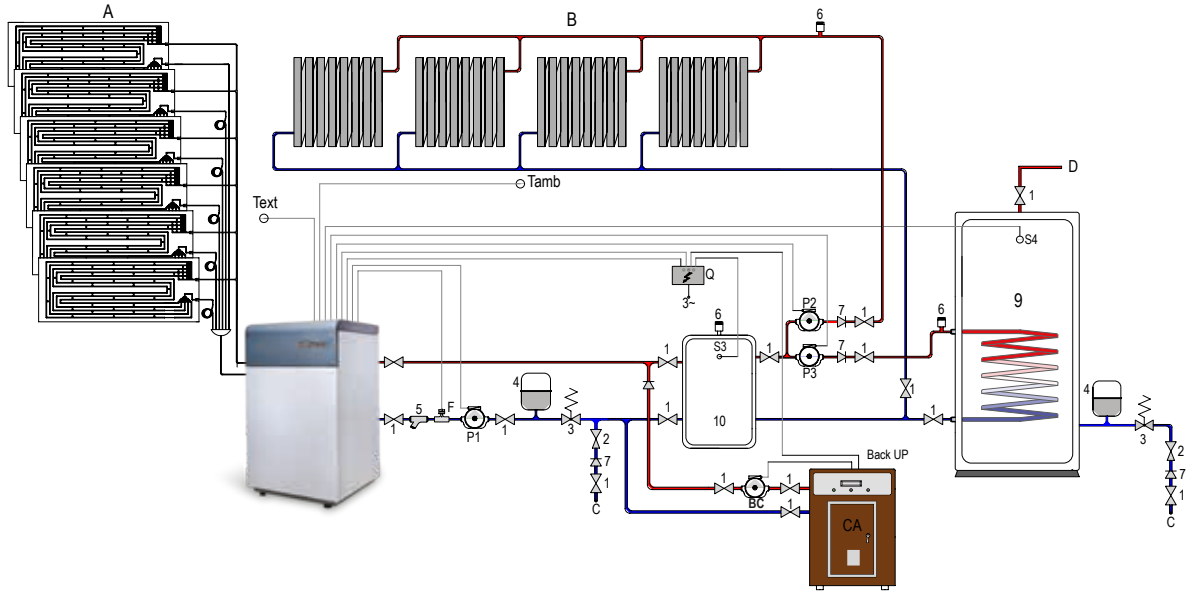
Central heating

Combined Solution (Central heating + Domestic Hot Water)



Central heating

Combined Solution with Backup (Central Heating + Domestic Hot Water with a backup boiler)



1	Shut-off Valve	7	Check Valve (non-return)	D	Hot Water Outlet	S4	Temperature Sensor S4
2	Pressure Reducer	9	Thermal Storage	F	Flow Switch	Tamb	Environment Thermostat
3	Security Valve	10	Buffer Tank	P1	Circulating Pump 1	Text	Outside Thermostat
4	Expansion Valve	A	Thermodynamic Solar Panels	P2	Circulating Pump 2	BC	Boiler Circulator Pump
5	Filter	B	Environment Heating	P3	Circulating Pump 3	B2	Resistance Kit (Support)
6	Drain Valve	C	Cold Water Inlet	S3	Temperature Sensor S3	Q	Control Box

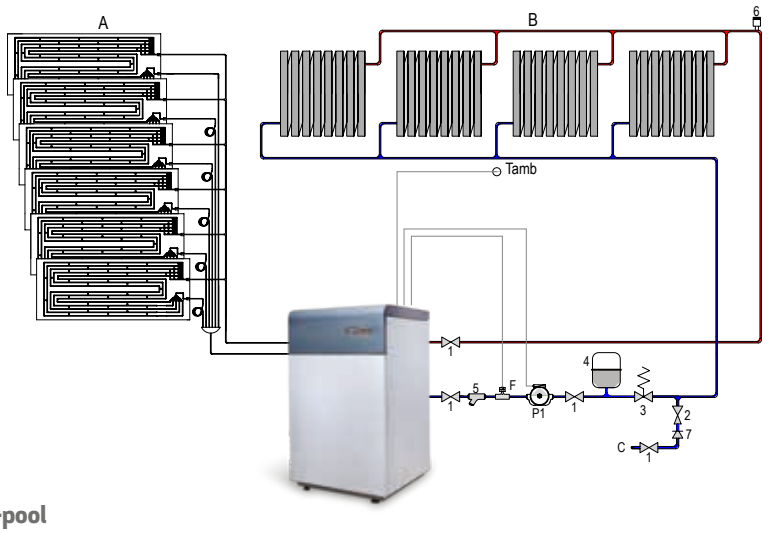
Choose your model

SOLAR BLOCK 88 PLUS 888 A

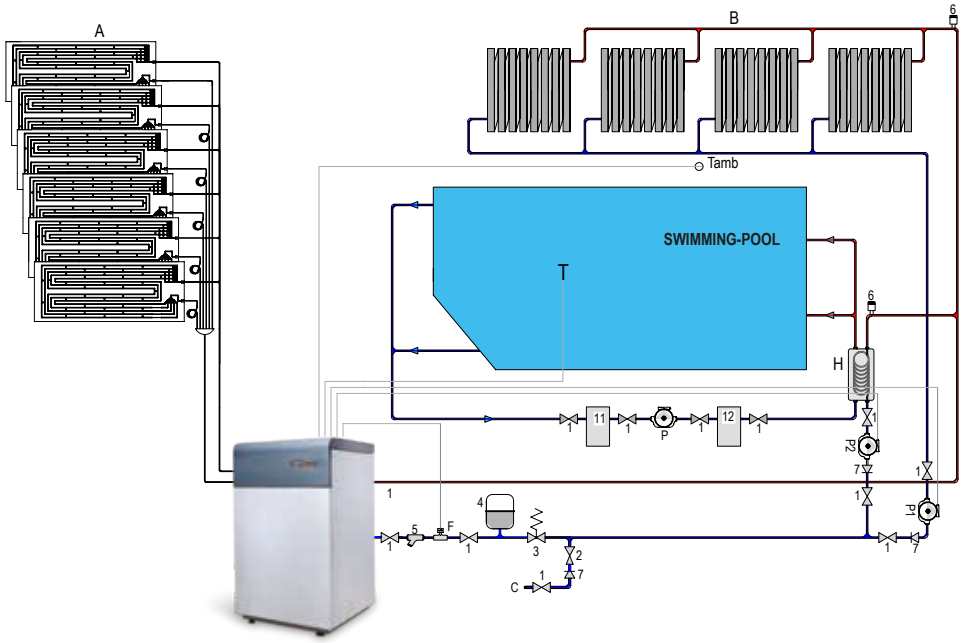
1 2 *3 *4 5

888 Represents the capacity of the equipment
88 Represents the number of panels

Central heating
Standard Installation



Central heating + Swimming-pool
Combined Installation



1	Shut-off Valve	6	Drain Valve	B	Environment Heating	Tamb	Environment Thermostat
2	Pressure Reducer	7	Check Valve (non-return)	C	Cold Water Inlet	T	Thermostat
3	Security Valve	11	Pre-filter	F	Flow Switch	G	Swimming-pool
4	Expansion Valve	12	Filter	P1	Circulating Pump 1	H	Water/Water Titanium Heat Exchanger
5	Filter	A	Thermodynamic Solar Panels	P2	Circulating Pump 2		

1 Model
Environment Heating Solar Block

2 Number of Solar Panels
6, 12, 16, 28, or 40

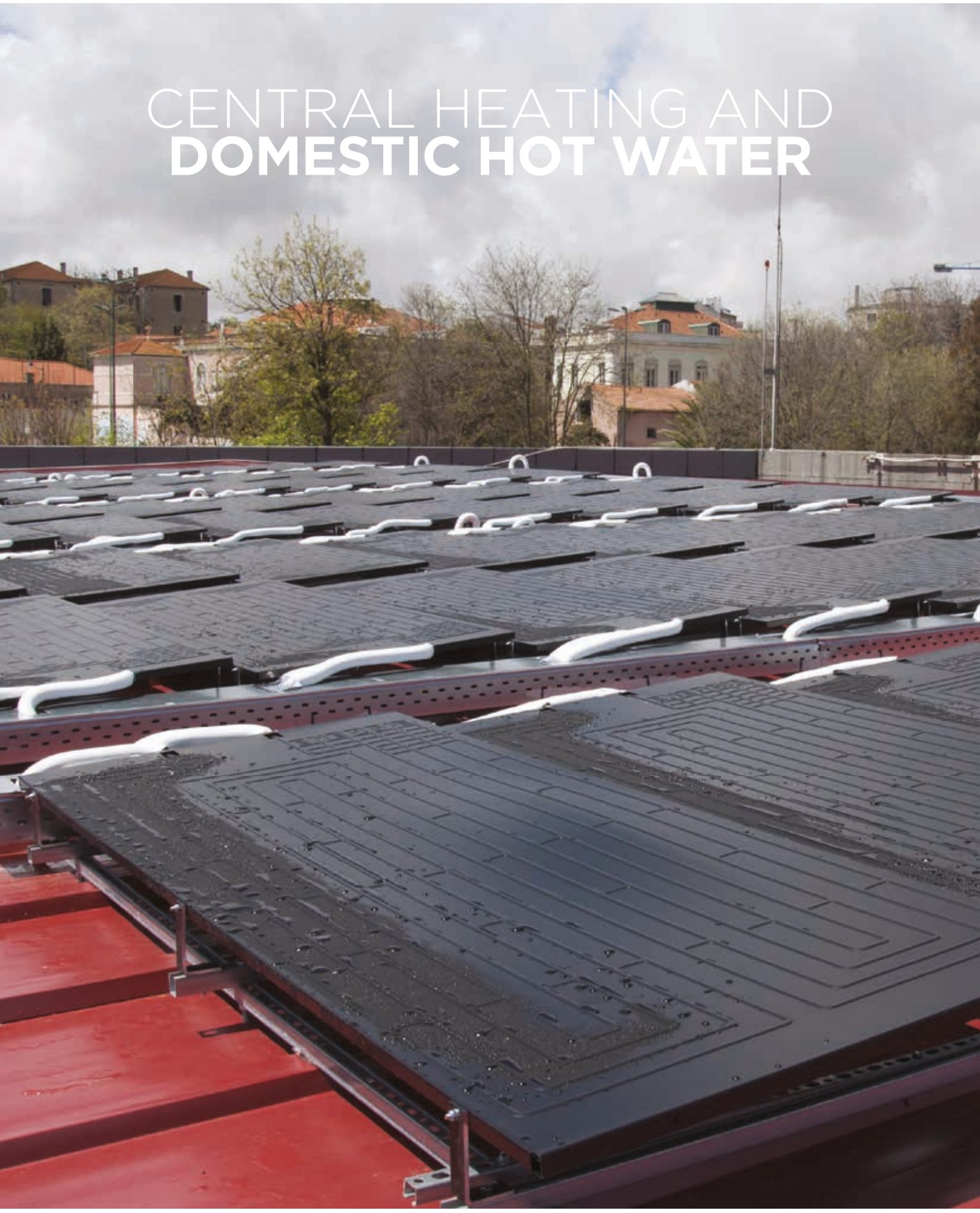
*3 **Combined Solution**
ACentral Heating or Central Heating + Domestic Hot Water (Plus)

*4 **DHW Cylinder capacity of the Combined Solution**
Capacities available are 200, 300 or 500 litres

5 **S** Single-Phase Version
T Three-Phase Version

* Only for the Combined Solution if applicable

CENTRAL HEATING AND **DOMESTIC HOT WATER**



RENEWABLE ENERGY

SOLAR BLOCK ULTRA | ULTRA PLUS

Thermodynamic Solar Solution for central heating and domestic hot water

Equipment with 12 and 16 solar panels

CENTRAL HEATING AND DOMESTIC HOT WATER

ENERGIE
THERMODYNAMIC SOLAR ENERGY

THERMODYNAMIC SOLAR SYSTEM
CENTRAL HEATING DOMESTIC HOT WATER

WARRANTY 10 YEARS SOLAR PANEL

Check warranty conditions

THE ULTRA SOLAR BLOCK IS AN ALL-IN-ONE SOLUTION. A THERMODYNAMIC SOLAR HEAT PUMP BUILT TO THE HIGHEST STANDARDS OF QUALITY WITH OUTSTANDING PERFORMANCE. WITH A COMPACT DESIGN, IT PERFORMS CENTRAL HEATING AND PRODUCES DOMESTIC HOT WATER, USING THE LATEST DC INVERTER TECHNOLOGY.

- ERP READY
- SOLAR PERFORMANCE
- SIMPLE INSTALLATION "PLUG AND USE"
- INDOOR UNIT REQUIRES SMALL SPACE (<1M^2)
- INTEGRATED DHW DEPOSIT (SOLAR BLOCK ULTRA PLUS) OF 200 LITERS IN AISI 316L STAINLESS STEEL
- DHW PRODUCTION UP TO 70^{0}C IN HEAT PUMP MODE THROUGH HEAT RECOVERY
- MAXIMUM DISTANCE BETWEEN INTERIOR UNIT AND OUTSIDE UP TO 20M.
- DC INVERTER TECHNOLOGY
- CAREL DISPLAY
- SOFT START SYSTEM
- HYDRAULIC KIT INCLUDED
- COMPLETE VERSATILITY

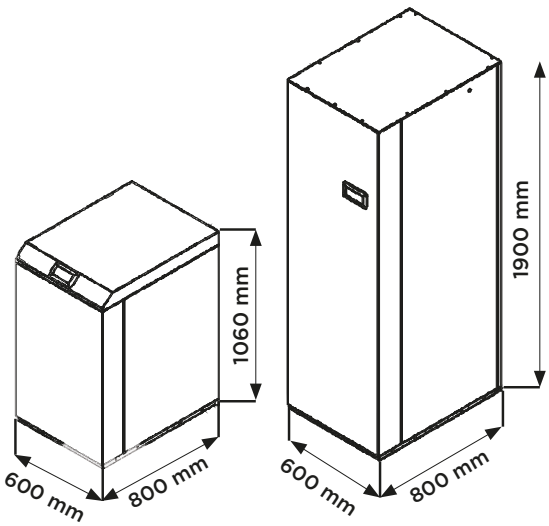
Thermodynamic Solar System
central heating and domestic hot water

INSIDE UNIT				ULTRA12	ULTRA PLUS12	ULTRA16	ULTRA PLUS16
Heating Capacity (1)	Power supplied		kW	5 - 19		8 - 26	
	Maximum power supplied		kW	18,70		25,8	
Heating Capacity (2)	Nominal power supplied		kW	10,30		16,2	
	Nominal consumption		kW	2,15		3,45	
	COP		kW	4,80		4,7	
Heating Energy Class				A++		A++	
Dimensions	HxWxD		cm	106X60X80	195x60x80	106X60X80	195x60x80
Weight			Kg	115	243	115	243
Maximum temperature			°C	60			
Hydraulic Connections		Inlet/Outlet		1"M			
Domestic Hot Water(3)	Tank		L	-	200	-	200
	Material			-	INOX AISI 316L	-	INOX AISI 316L
	Temp. max. (compressor only)		°C	-	70	-	70
	Electrical backup		W	-	1500	-	1500
	Water connections	Cold / Hot		-	3/4"M	-	3/4"M
	COP DHW(3)			-	3,27	-	3,27
	Tapping profile			-	L	-	L
	Efficiency		%	-	138	-	138
	Energy Class DHW			-	A+	-	A+
Refrigerant	Type			R410A			
	Preload		Kg	3,5			
	Connections	Liquid		1/2"			
		Steam		3/4"			
Sound pressure	(distance 10m)		dBA	65			
Electrical Supply		Type		230V or 400 V			
	Electric cable	230V	mm^2	3G6			
		400V	mm^2	5G4			
	Protection Circuit Breaker	230V		46A			
		400V		32A			
OUTSIDE UNIT - SOLAR PANELS							
Number				12		16	
Dimensions	HxWxD		mm	200x800x20			
Weight			Kg	8			
Type				Passive Solar Evaporator			
Material				Anodized aluminum			
CONNECTION BETWEEN UNITS							
Maximum nominal distance			m	20			
Maximum Drop			m	15			

(1) According to EN14511; Air temperature DB/WB 14°C/13°C; Water temperature inlet/outlet 30°C/35°C; Solar radiation 800w/m² | (2) According to EN14511; Air temperature DB/WB 7°C/6°C; Water temperature inlet/outlet 30°C/35°C; Solar radiation 400w/m² | (3) According to EN 16147, A 14 / W 10-54

Technical Drawing

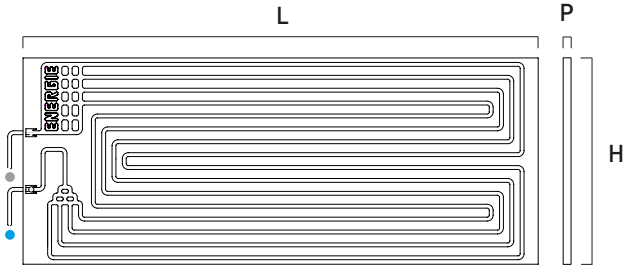
INSIDE UNIT



SOLAR PANELS

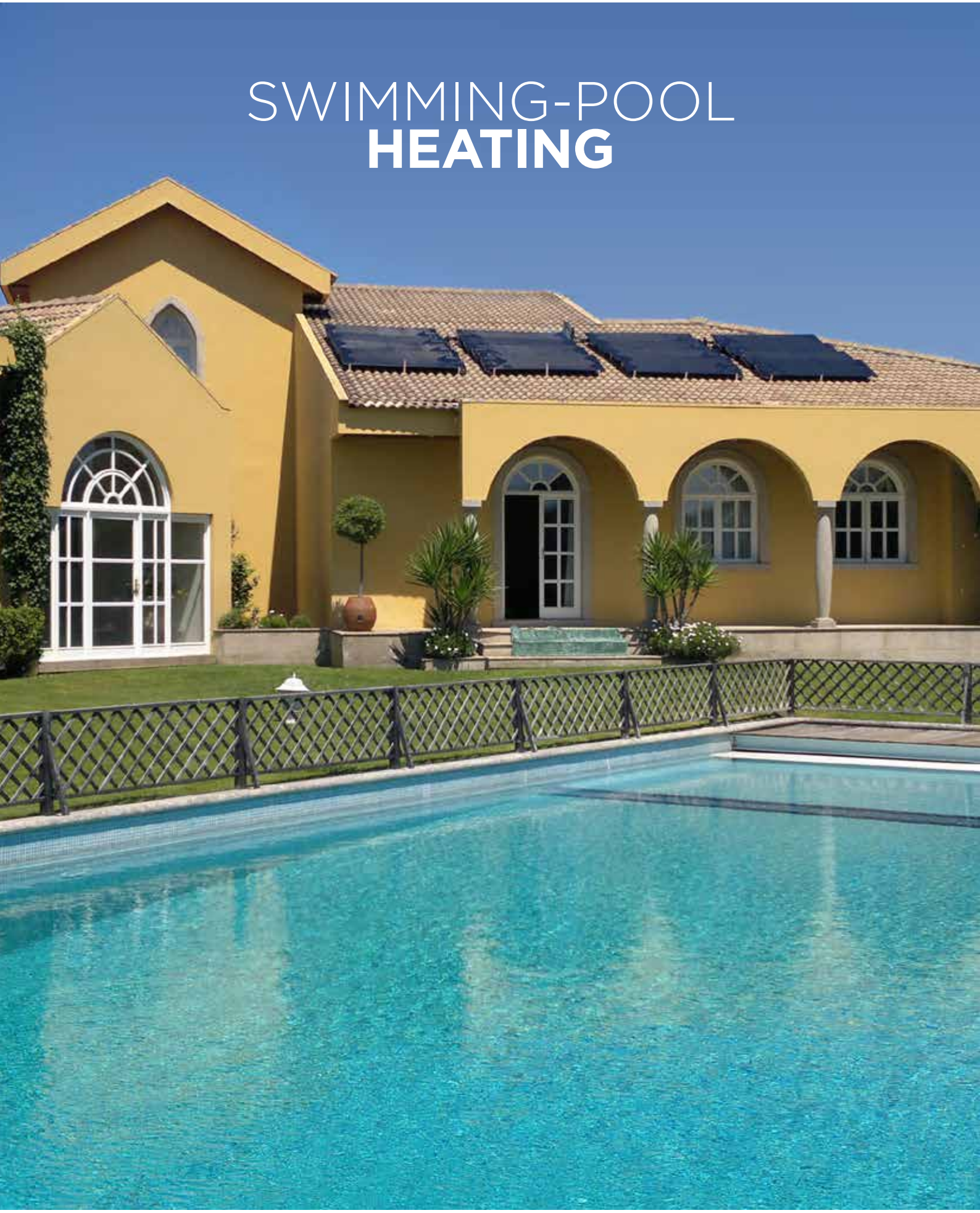
L-2000mm
H-800mm
P-20mm

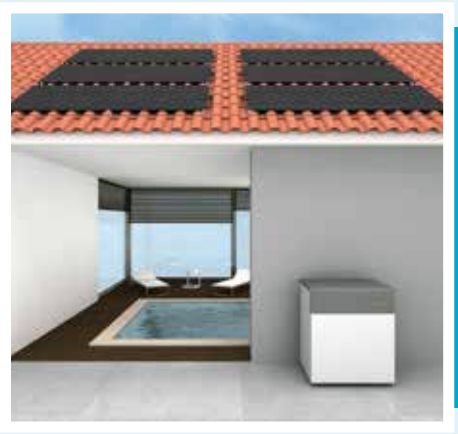
- Steam line
- Liquid line



X12 or x16

SWIMMING-POOL **HEATING**





RENEWABLE ENERGY

SOLAR BLOCK SWIMMING-POOL

Thermodynamic Solar Solution for Swimming-pools

Equipment from 6 up to 40 solar panels

SWIMMING-POOL HEATING

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

WARRANTY 10 YEARS SOLAR PANEL

Check warranty conditions

- 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.
- POSSIBILITY OF ALTERNATING BETWEEN ENVIRONMENT HEATING IN THE COLDER SEASONS AND SWIMMING-POOL HEATING IN THE WARMER SEASONS.
- HIGHLY-RESISTANT AND DURABLE TITANIUM EXCHANGER.
- HIGHLY EFFICIENT SCROLL COMPRESSOR.
- FREE OF DEFROST CYCLES.
- SMALL DIMENSION INDOOR UNIT.
- ELECTRONIC EXPANSION VALVE.

MAXIMUM EFFICIENCY

ENERGIE
THERMODYNAMIC SOLAR ENERGY

Note: Technical drawing of the Solar Block on page 62
Simplified representative diagram

Thermodynamic solar system
swimming-pool heating

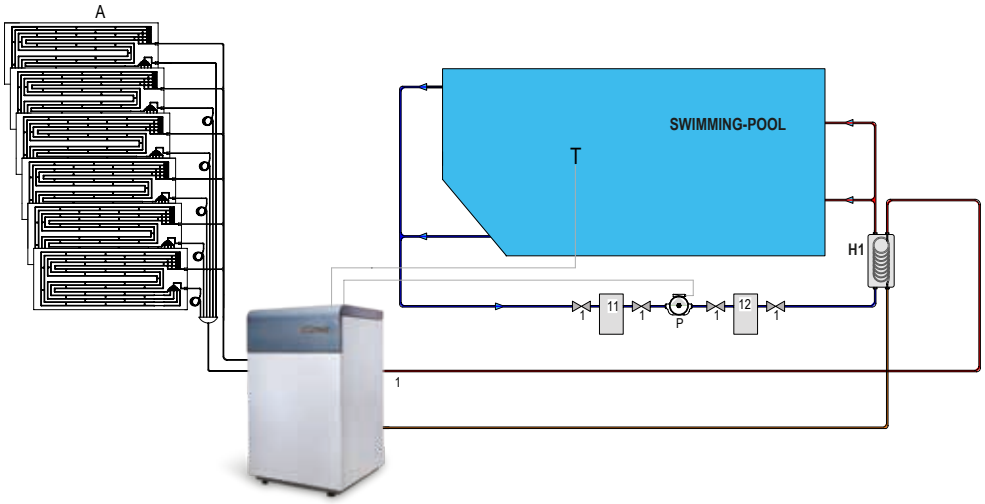
Model		Solar Block 6	Solar Block 12	Solar Block 16	Solar Block28	Solar Block 40
Solar Panels		6	12	16	28	40
Maximum Thermal Power	W	7500	16580	24210	38220	54600
Power Consumption Min.	W	1230	2010	3210	5650	8450
Electrical Supply		1~/ 230V / 50 Hz or 3~/ 400V / 50 Hz			3~/ 400V / 50 Hz	
Protection (M/T)*	A	16/6	25/10	2x16/16	20	25
Gross Weight	kg	48	96	128	210	320

*Magnetothermic protection switch (S, for the Single-phase version and T, for the Three-phase version) to be fitted by the installer.

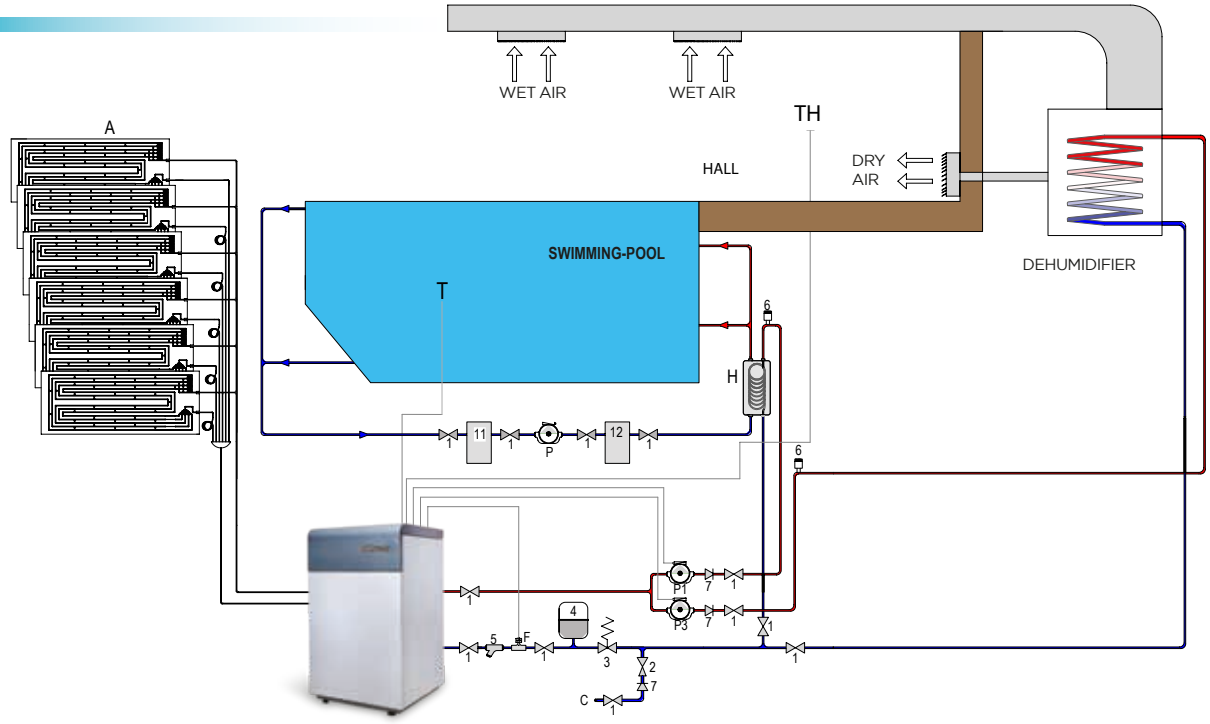
Model	N. Panels	Volume to be heated* (Water Mirror Surface)	Cylinder	Electrical Supply
Solar Block 6	6	16 m^2	-	230V or 400V
Solar Block 12	12	40 m^2	-	230V or 400V
Solar Block 16	16	60 m^2	-	230V or 400V
Solar Block 28	28	120 m^2	-	400V
Solar Block 40	40	150 m^2	-	400V
Solar Block 6 Plus	6	16 m^2	200	230V or 400V
Solar Block 12 Plus	12	40 m^2	300	230V or 400V
Solar Block 16 Plus	16	60 m^2	300	230V or 400V
Solar Block 28 Plus	28	120 m^2	500	400V
Solar Block 40 Plus	40	150 m^2	500	400V

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

Swimming-pool Heating
Standard Installation



Swimming-pool + Dehumidifier
Combined Solution



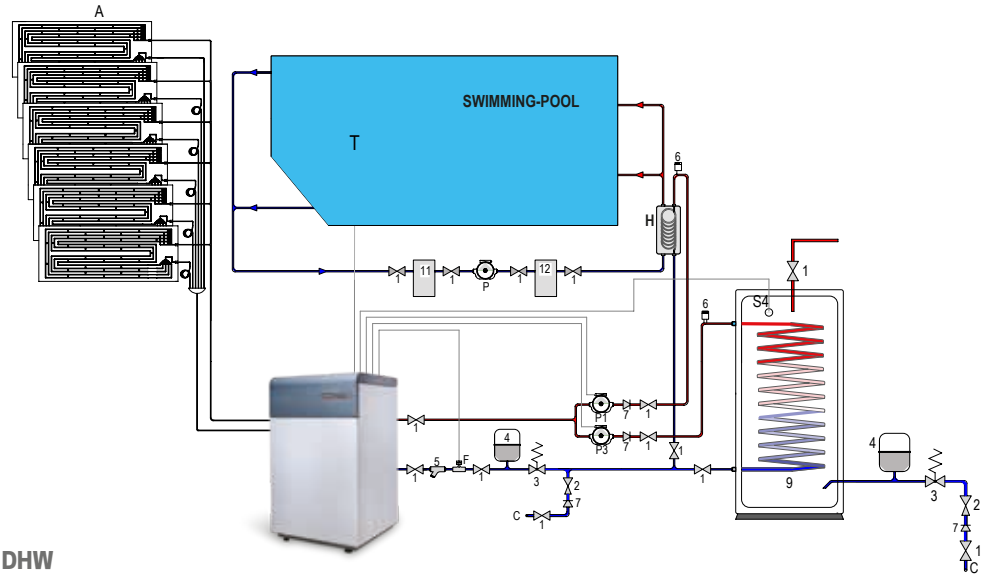
1	Shut-off Valve	6	Drain Valve	C	Cold Water Inlet	T	Thermostat
2	Pressure Reducer	7	Check Valve (non-return)	F	Flow Switch	G	Swimming-pool
3	Security Valve	11	Pre-filter	P1	Circulating Pump 1	H	Water/water titanium heat exchanger
4	Expansion Valve	12	Filter	P2	Circulating Pump 2	TH	Thermo-Hygrometer
5	Filter	A	Thermodynamic Solar Panels	P3	Circulating Pump 3	H1	Gas/Water Titanium Heat Exchanger

Choose your model

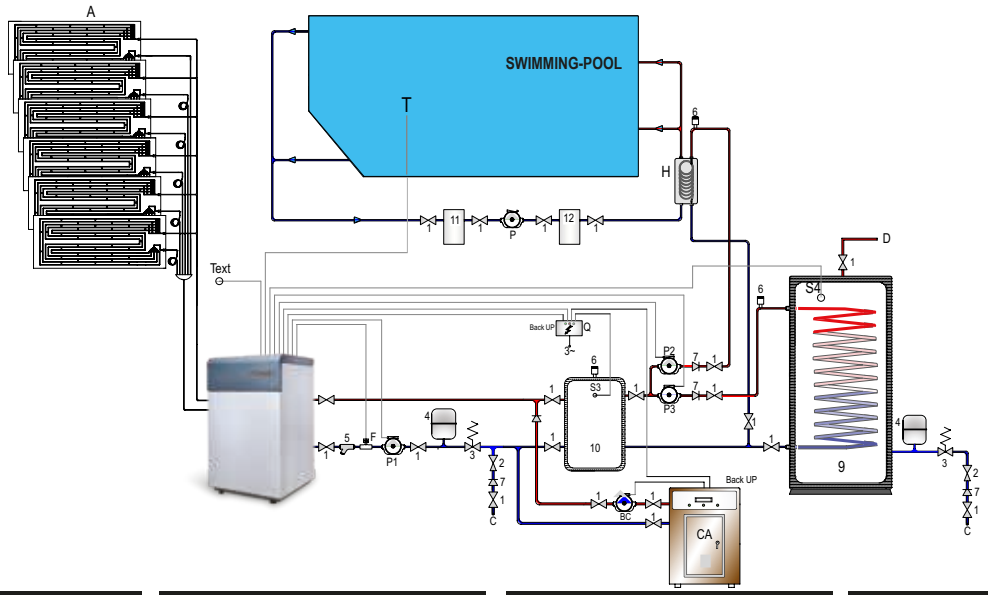
SOLAR BLOCK 88 PLUS 888 A

1 2 *3 *4 5

Swimming-pool + DHW
Combined Solution



Swimming-pool + DHW
Combined Solution with backup



1	Shut-off Valve	9	Thermal Storage	P1	BCirculating Pump 1	BC	Boiler Circulator Pump
2	Pressure Reducer	11	Pre-filter	P2	Circulating Pump 2	Q	Control Box
3	Security Valve	12	Filter	P3	Circulating Pump 3	G	Swimming-pool
4	Expansion Valve	A	Thermodynamic Solar Panels	S3	Temperature Sensor S3	H	Water/water titanium heat exchanger
5	Filter	C	Cold Water Inlet	S4	Temperature Sensor S4		
6	Drain Valve	D	Hot Water Outlet	Text	Outside Thermostat		
7	Check Valve (non-return)	F	Flow Switch	T	Thermostat		

1 Model
Swimming-pool Heating Solar Block

2 Numbers of Solar Panels
6, 12, 16, 28, ou 40

*3 **Combined Solution**
Central Heating or Central Heating + Domestic Hot Water (Plus)

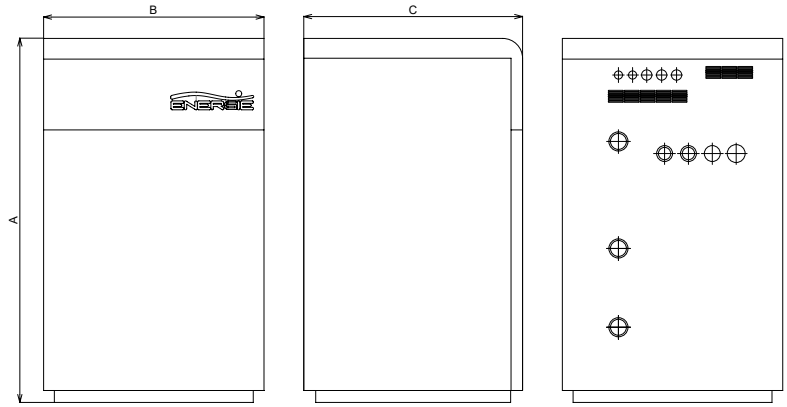
*4 **Capacity**
Being a Plus Solution the Available Capacities are 200, 300 or 500 litres

5 **M** Single-Phase Version
T Single-Phase Version

* Only for the Combined Solution if applicable

SOLAR BLOCK COMMON TO ECO XL, CENTRAL HEATING AND SWIMMING-POOL

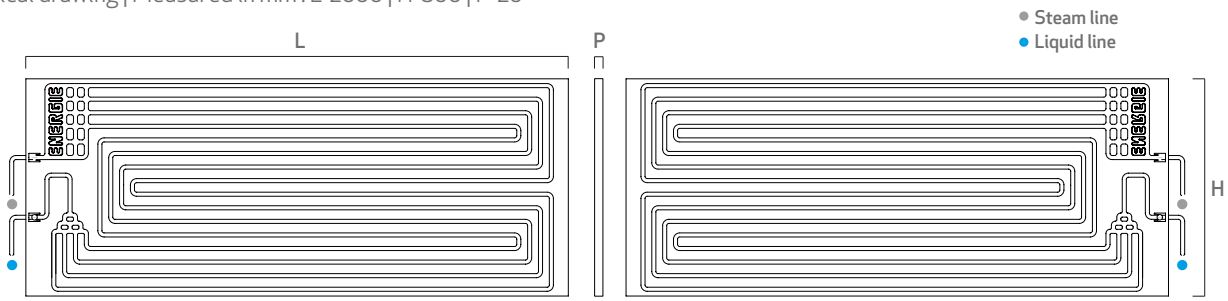
Technical drawing



	6 to 16 Panels	28 to 40 Panels
A	915	915
B	555	654
C	550	634.5

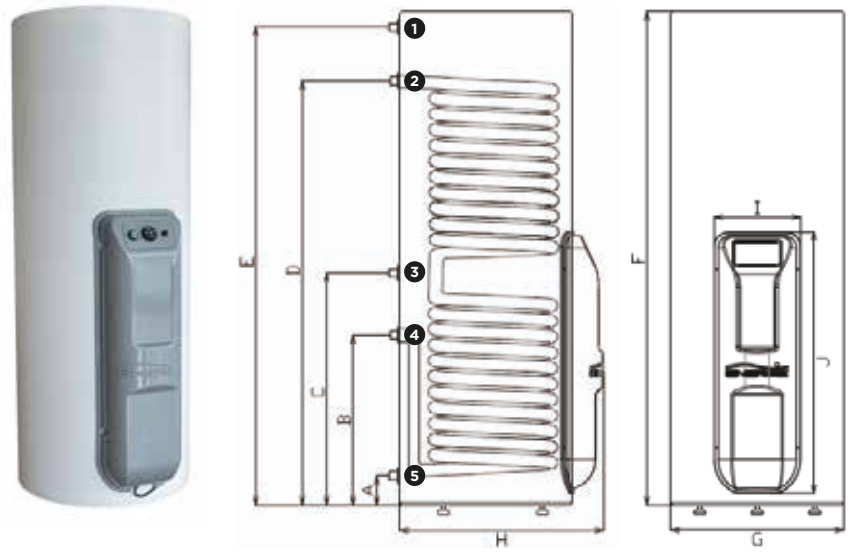
LEFT AND RIGHT THERMODYNAMIC SOLAR PANEL

Technical drawing | Measured in mm : L-2000 | H-800 | P-20



DHW CYLINDERS OF THE COMMON PLUS SOLUTIONS FOR CENTRAL HEATING AND SWIMMING-POOL

Technical drawing



	300 HP	500 HP
A	74 mm	92mm
B	681 mm	625 mm
C	815 mm	1784 mm
D	1251 mm	1515 mm
E	1671 mm	1927 mm
F	1750 mm	1990mm
G	650 mm	650 mm
H	950 mm	950 mm
I	290 mm	290 mm
J	879 mm	879 mm
1 (Hot Water)		**4 (Coil Outlet)**
2 (Coil Inlet)		**5 (Cold Water)**
3 (Recirculation)		

ENERGIE®

THERMODYNAMIC SOLAR ENERGY