Iris Hellas
Technology Innovations

ENERGIE®
THERMODYNAMIC SOLAR ENERGY

RENEWABLE ENERGY

GENERAL CATALOGUE

THERMODYNAMIC SOLAR ENERGY
HEAT PUMPS

RENEWABLE ENERGY | ECONOMY | INDEPENDENCE | ECOLOGY

MADE IN EUROPE

ENERGIE®
THERMODYNAMIC SOLAR ENERGY

Address Zona Industrial de Laúndos, Lote 48
4570-311 Laúndos - Póvoa de Varzim PORTUGAL
GPS Coordinates N 41 27.215' , W 8 43.669'
Telephone + 351 252 600 230
Fax number + 351 252 600 239
E-mail geral@energie.pt
Website www.energie.pt

Iris Hellas
Technology Innovations

Company certifications

Partners of the organizations

APISOLAR

ENERGIE
THERMODYNAMIC SOLAR ENERGY

Iris Hellas
Technology Innovations

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

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

2007
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.

PRESENT

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-LEGIONELA

Function that allows the user to disinfect/sanitise the equipment 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, non-flammable and non-toxic.

R407C

Cooling liquid that is environmentally friendly, non-flammable 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

PRODUCT CERTIFICATES

Certified products transmit more safety and reliability to the client when purchased.

ENERGIE
THERMODYNAMIC SOLAR ENERGY

PERFORMANCE **EFFICIENCY QUALITY**

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

- **DOMESTIC HOT WATER**
- **CENTRAL HEATING**
- **SWIMMING-POOL HEATING SYSTEM**

INDEX

THERMODYNAMIC SOLAR ENERGY

HEAT PUMPS

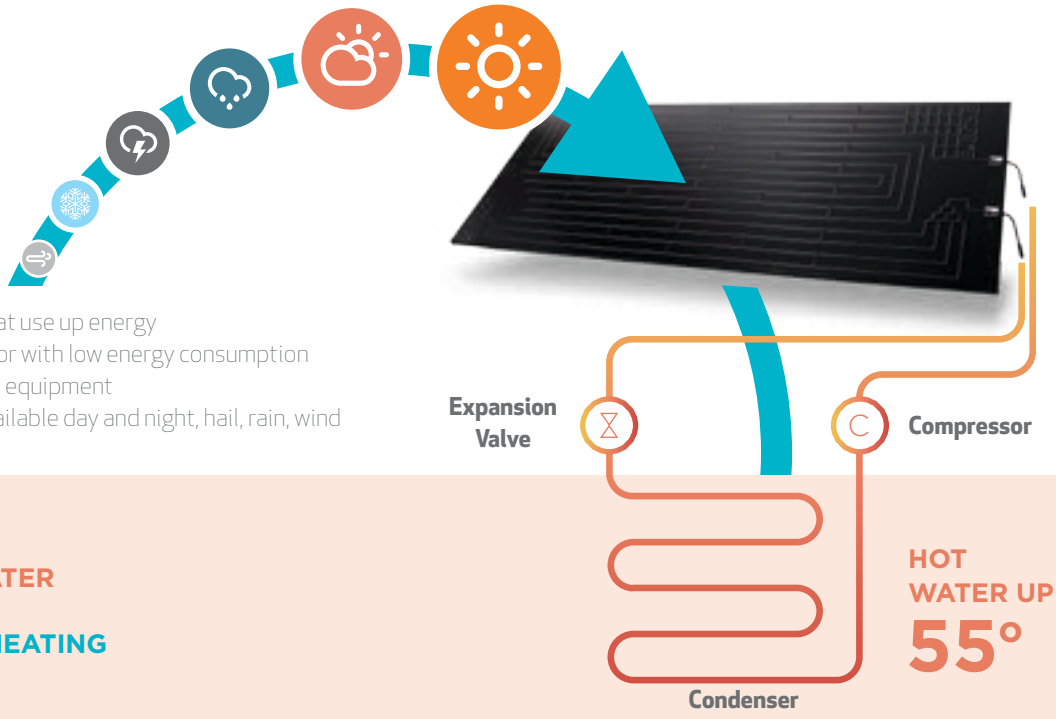
THERMODYNAMIC SOLAR SYSTEM OPERATING PRINCIPLE

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°

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.

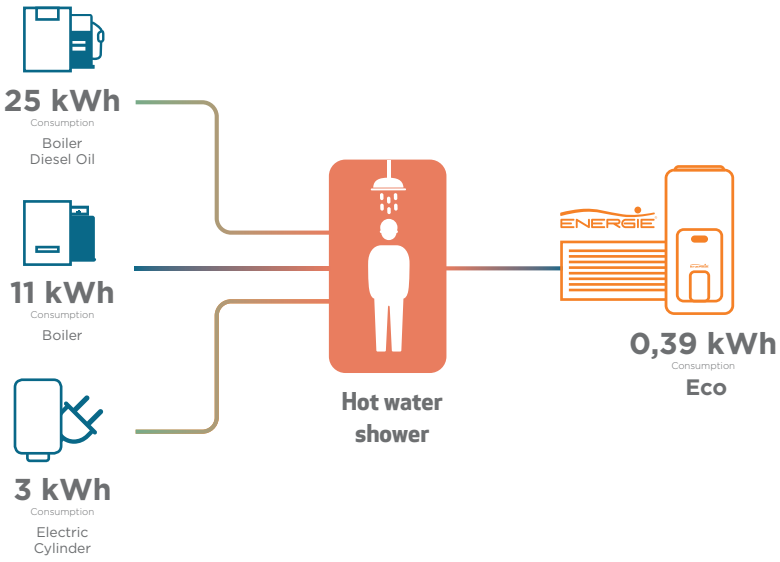
THERMODYNAMIC SOLAR PANEL

Right and 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 10º TO 85º 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

Distribution of consumption to different systems



DID YOU KNOW?

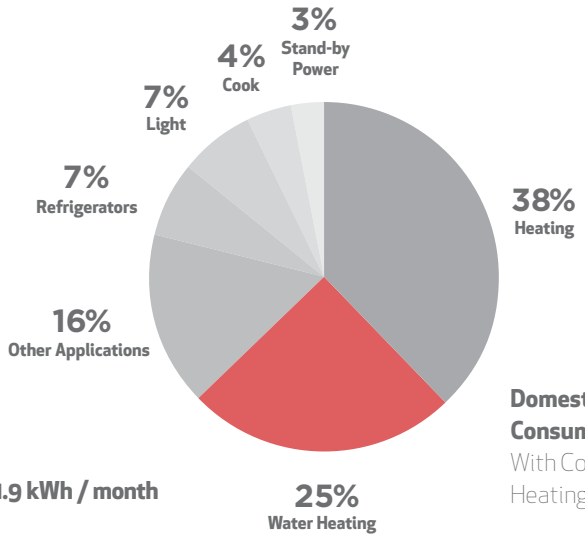
That all thermodynamic solar systems only have one mechanical element that requires electricity? This element is a low energy consumption compressor and is extremely efficient. As the capacity to capture heat from the environment is primarily ensured through solar radiation, it is superior to other equipment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



Domestic Energy Consumption
With Conventional Heating Equipment

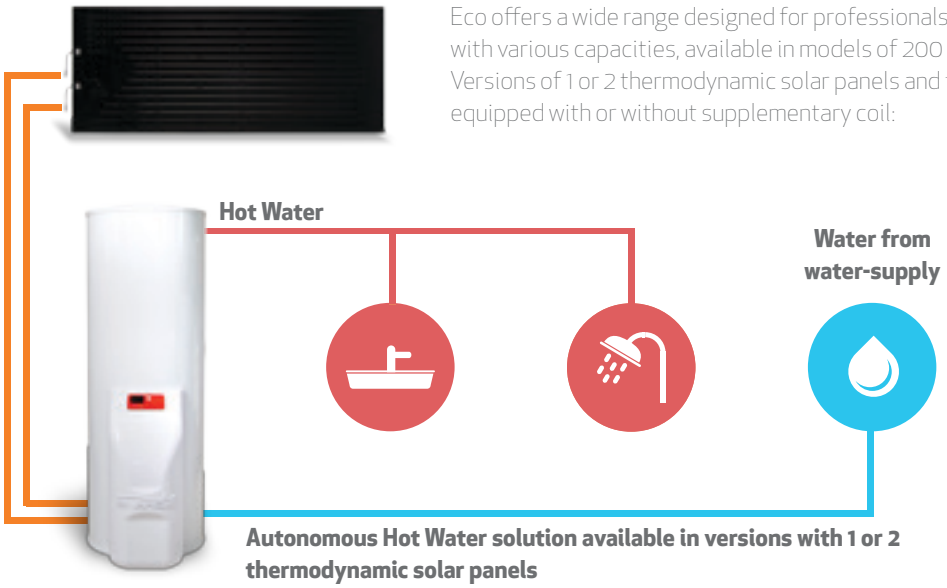
ECO

Probably the most developed solar water heater in the world

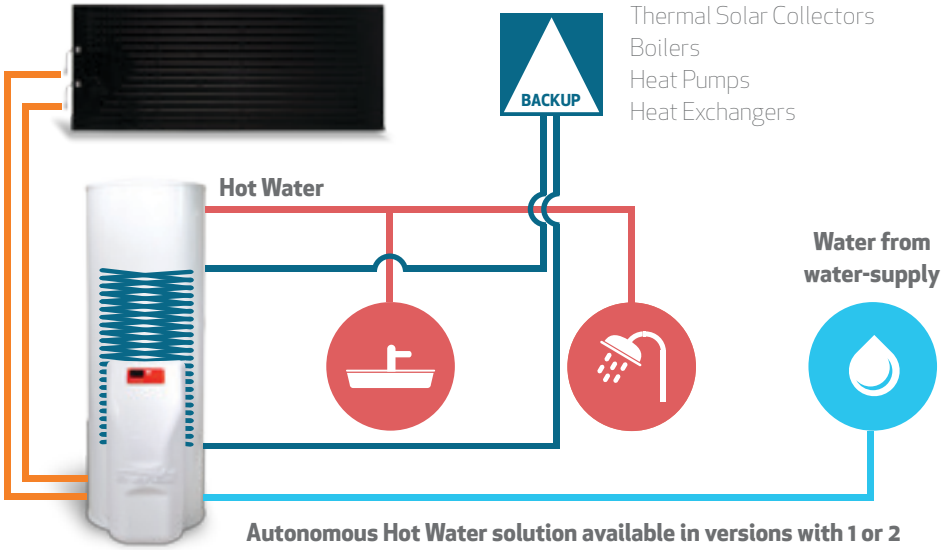
Available with capacities of 200 to 450 litres.
Versions with one or two solar panels, with or without supplementary coil.
Cylinder available in enamelled or stainless steel.

ECO

Eco offers a wide range designed for professionals from this industry, with various capacities, available in models of 200 to 450 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

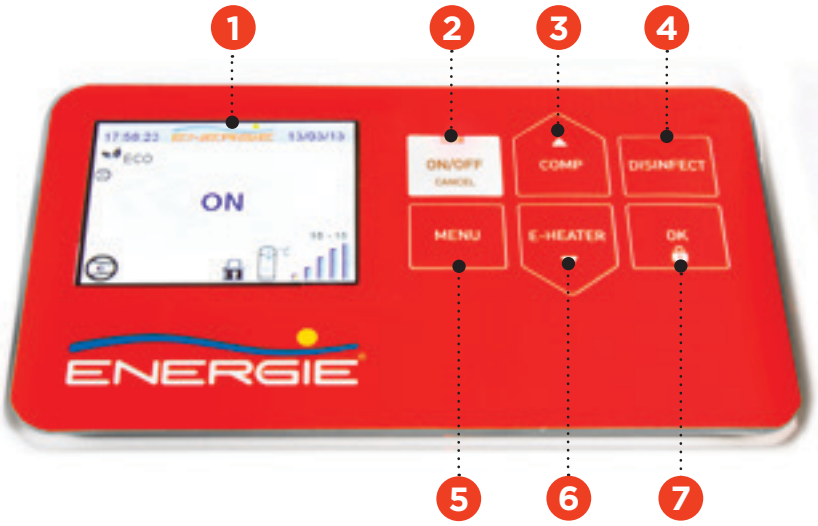
1. **Model**
   Eco
2. **Capacity (litres)**
   200, 250, 300, 450 litre Cylinders
3. **Cylinder Material**
   esm (Enamelled)
   i (Stainless)
*4. **2 Solar Panels**
   S
*5. **Supplementary Coil**
   X

* Optional and when applicable
888 Represents the capacity of equipment

Examples

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

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

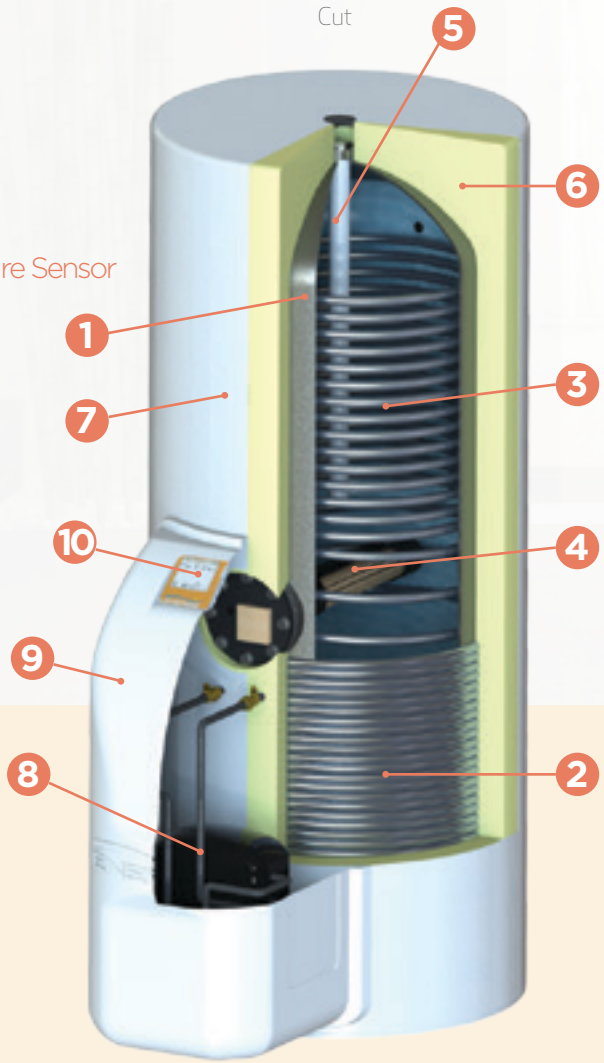
100% ENVIRONMENTALLY FRIENDLY

- 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 55º 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

ENERGIE
THERMODYNAMIC SOLAR ENERGY

MAXIMUM EFFICIENCY

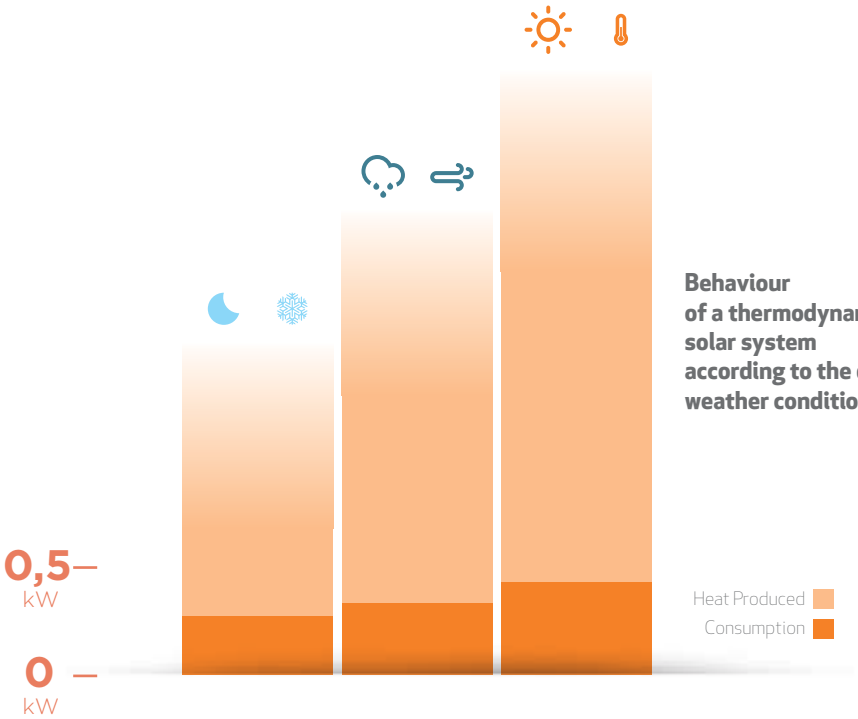
1. DHW Cylinder
2. Condenser
3. Optional Supplementary Coil
4. Ceramic Resistance + Thermostat + Temperature Sensor
5. Magnesium Anode
6. High Density Insulation
7. Outside Coating
8. Thermodynamic Block
9. Cover
10. Electronic Controller



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

Check warranty conditions

Thermodynamic Solar System
with one Solar Panel

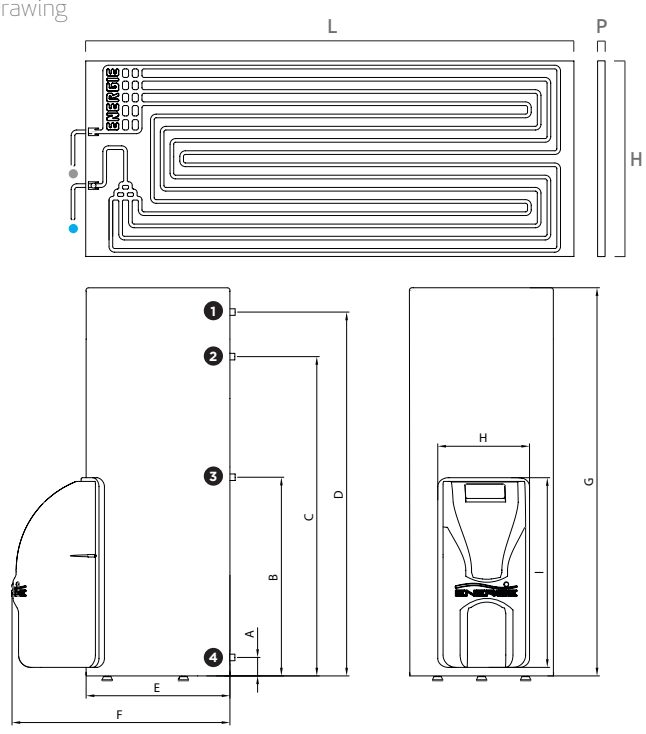
Specifications		Eco 200esm	Eco 250i Eco 250esm	Eco 300i Eco 300esm
Nominal Capacity	l	200	250	300
Thermal Power (Med/Max)	W	1690/2900	1690/2900	1690/2900
Power Consumption (Med/Max)	W	390/550	390/550	390/550
Temperature (Factory Setpoint)	°C	52	52	52
Maximum Temperature	°C	70	70	70
Max. Amount of water at 40°C in a run (St./En.)	l	-/290	330/345	375/408
Maximum Operation Pressure	bar	6	6	6
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	230/50-60	230/50-60	230/50-60

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	74	74	74
B	650	815	815
C	1146	1326	1543
D	1274	1454	1671
E	580	580	580
F	880	880	880
G	1350	1530	1750
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

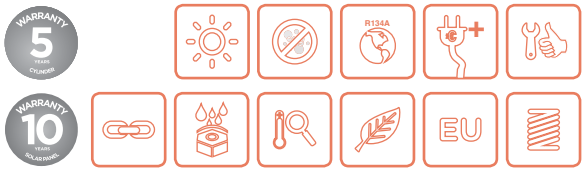
ENERGIE THERMODYNAMIC SOLAR ENERGY

Iris Hellas Technology Innovations

Thermodynamic Solar System
with one Solar Panel + Supplementary Coil

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	52	52
Maximum Temperature	°C	70	70
Max. Amount of water at 40°C in a run (St.)	l	325	370
Maximum Operation Pressure	bar	6	6
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.)	Kg	69	81
Electrical Supply	V/Hz	230/50-60	230/50-60

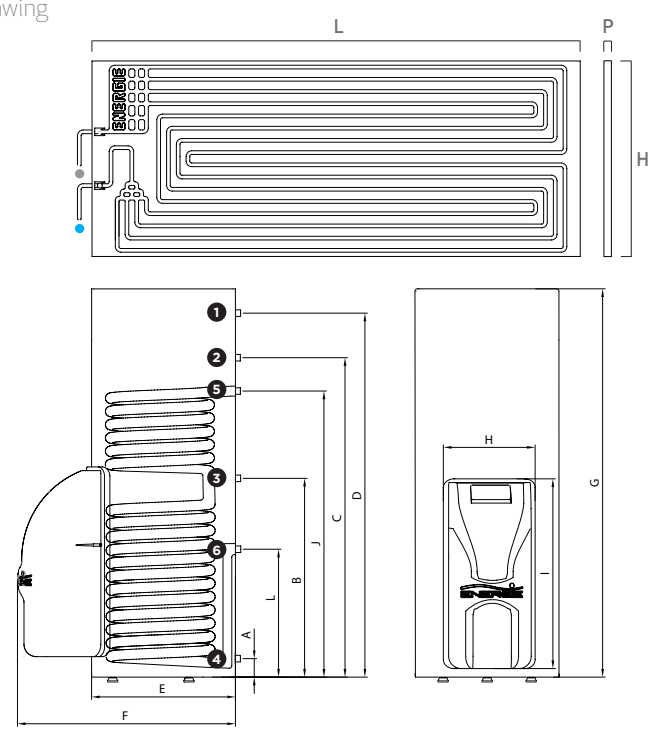
Allows the connection of another heat source
Easy Install
Equipment with fluid pre-charge



Technical drawing

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

- Steam line
- Liquid line



Dimensions (mm)	Eco 250ix	Eco 300ix
A	74	74
B	815	815
C	1326	1543
D	1454	1671
E	580	580
F	880	880
G	1530	1750
H	370	370
I	765	765
J	1251	1251
L	681	681

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)	1" Male
6 (Coil Outlet)	1" Male

*Optional

With flares valves on the solar panel and on the thermodynamic group
With dielectric threads for water connections

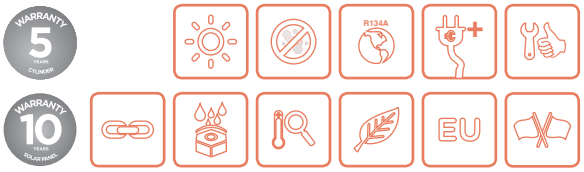
Iris Hellas
Technology Innovations

ENERGIE
THERMODYNAMIC SOLAR ENERGY

Thermodynamic Solar System
with two Solar Panels

Specifications		Eco 250is	Eco 300is Eco 300esms	Eco 450is
Nominal Capacity	l	250	300	450
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	52	52	52
Maximum Temperature	°C	70	70	70
Max. Amount of water at 40°C in a run (St./En.)	l	330/-	375/408	515/-
Maximum Operation Pressure	bar	6	6	6
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	2500
Gross Weight of Cylinder (St./En.)	Kg	62/-	74/95	110/-
Electrical Supply	V/Hz	230/50-60	230/50-60	230/50-60

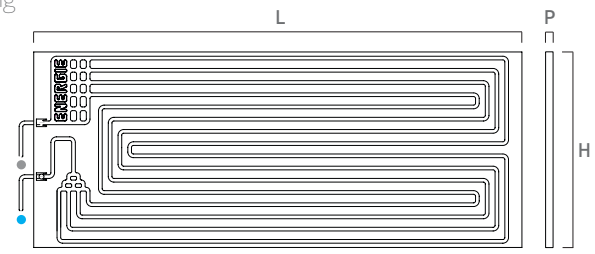
Superior Performance
Equipment with fluid pre-charge
Larger number of users



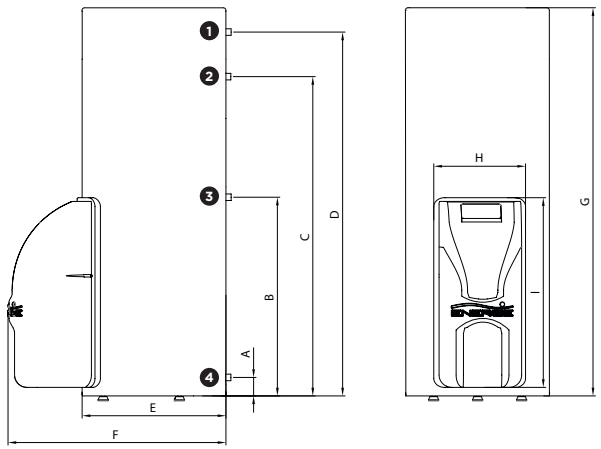
Technical Drawing

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

● Steam line
● Liquid line



(x2)



Includes Liquid Distributor
With dielectric threads for water connections

Dimensions (mm)	Eco 250is	Eco 300is Eco 300esms	Eco 450is
A	74	74	77
B	815	815	757
C	1326	1543	1769
D	1454	1671	1912
E	580	580	650
F	880	880	950
G	1530	1750	1950
H	370	370	370
I	765	765	765

	Eco250is 300is/300esms	Eco450is
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

ENERGIE THERMODYNAMIC SOLAR ENERGY

Iris Hellas Technology Innovations

Thermodynamic Solar System
with two Solar Panels + Supplementary Coil

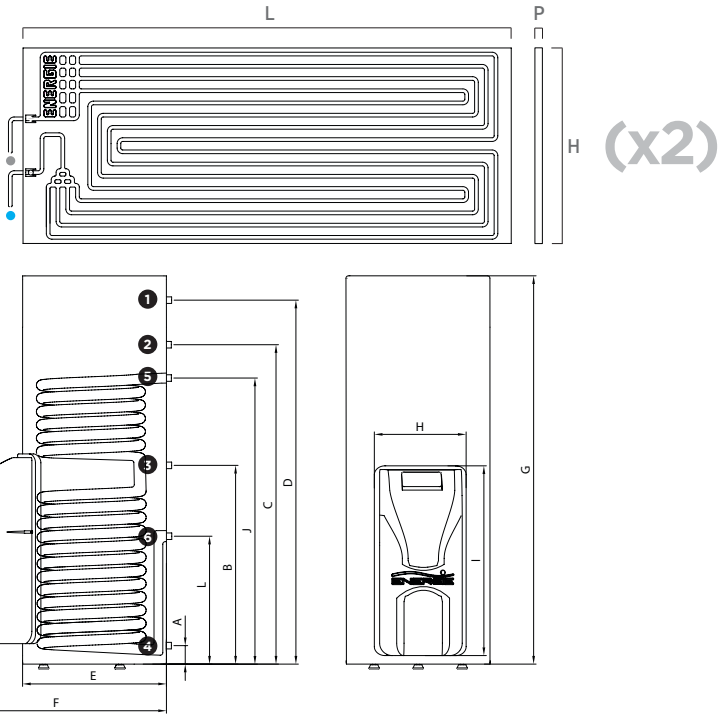
Specifications		Eco 250isx	Eco 300isx	Eco450isx
Nominal Capacity	l	250	300	450
Thermal Power (Med/Max)	W	2800/4550	2800/4550	2800/4550
Power Consumption (Med/Max)	W	595/890	595/890	595/890
Temperature (Factory Setpoint)	°C	52	52	52
Maximum Temperature	°C	70	70	70
Max. Amount of water at 40°C in a run (St.)	l	325	370	510
Maximum Operation Pressure	bar	6	6	6
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	2500
Gross Weight of Cylinder (St.)	Kg	69	81	117
Electrical Supply	V/Hz	230/50-60	230/50-60	230/50-60

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
With dielectric threads for water connections

Dimensions (mm)	Eco 250isx	Eco 300isx	Eco 450isx
A	74	74	77
B	815	815	757
C	1320	1543	1769
D	1454	1671	1912
E	580	580	650
F	880	880	950
G	1530	1750	1950
H	370	370	370
I	765	765	765
J	1251	1251	Nd
L	681	681	Nd

	Eco 250isx/300isx	Eco450sx
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)	1" Male	1" Male
6 (Coil Outlet)	1" Male	1" Male

*Optional

Iris Hellas Technology Innovations

ENERGIE THERMODYNAMIC SOLAR ENERGY

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 450is	2		x		450	9
Eco 250isx	2		x		250	5
Eco 300isx	2		x		300	6
Eco 450isx	2		x		450	9

SOLAR BOX
RETRO FITS TO THE EXISTING CYLINDER

- WORKS DAY & NIGHT, IN HAIL, RAIN, WIND OR SHINE
- THE SOLAR BOX CAN BE HUNG ON THE WALL OR BE PLACED ON THE FLOOR
- VERY COMPACT UNIT
- RELIABLE HOT WATER
- ADAPTS TO ALL KINDS OF CYLINDERS

WARRANTY 10 YEARS SOLAR PANEL

Check warranty conditions

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%

Iris Hellas
Technology Innovations

ENERGIE
THERMODYNAMIC SOLAR ENERGY

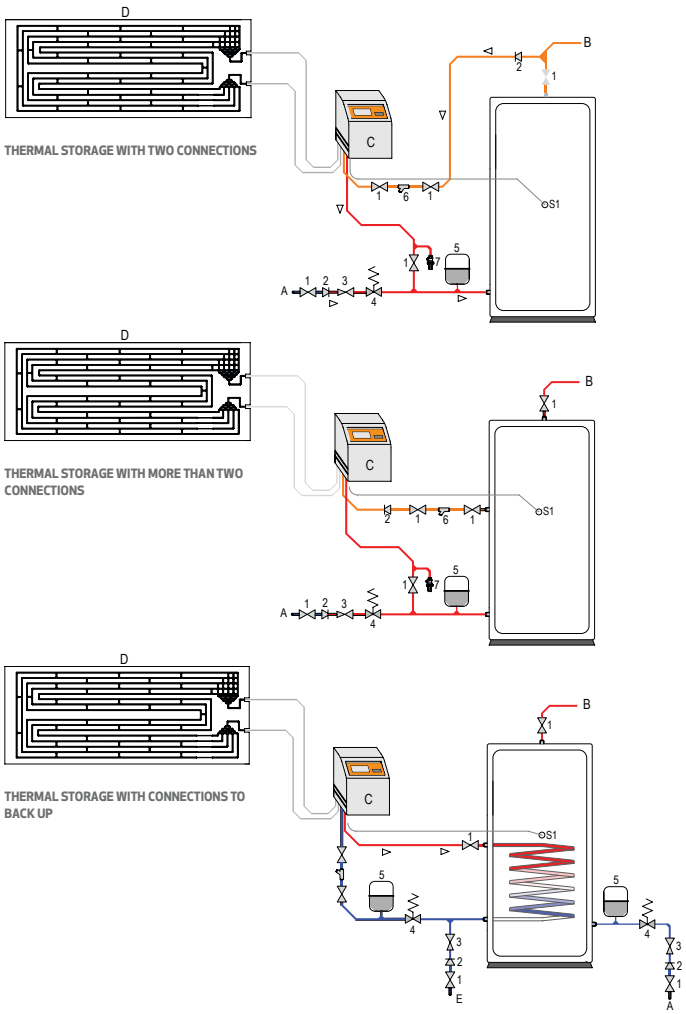
Diagram

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

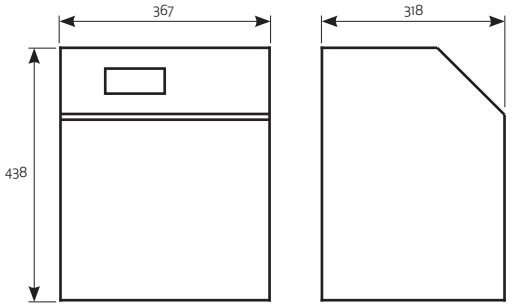
Circulation Pump Suitable for DHW

Heats water up to 55°C

High Performance Plate Heat Exchanger Suitable for DHW



Technical drawing



Specifications		
Provided Thermal Power (Min./Max.)	W	800/2200
Power Consumption (Med./Max.)	W	250/490
Electrical Supply	V/Hz	230/50-60
Cooling Fluid	-/kg	R134a / 0,8
Maximum Temperature	°C	55
Maximum Operation Pressure	bar	7
Hydraulic Connection (Inlet/Outlet)	Pol.	1/2 | 1/2
Weight (Solarbox/Panel)	kg	23,5 / 8
Flare Connections (Suction/Liquid)	Pol.	3/8 | 1/4


ENERGIE
THERMODYNAMIC SOLAR ENERGY


ENERGIE
THERMODYNAMIC SOLAR ENERGY

THERMODYNAMIC SOLAR BLOCK

ELETRONIC EXPANSION VALVE

Solar Block

DOMESTIC HOT WATER INDUSTRIAL USE

CENTRAL HEATING

SWIMMING-POOL HEATING

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


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

ENERGIE®
THERMODYNAMIC SOLAR ENERGY

Versatility of the Solar Block application in an installation box.

Energy solutions in conformity with the Kyoto protocol.

ELECTRONIC CONTROLLER

ESC **Exit**

Unlock | ON/OFF

SET **Menu | Modify | Set**

Change Values | Go through Menu Sub-Menu | Display

\# **ON/OFF Backup**

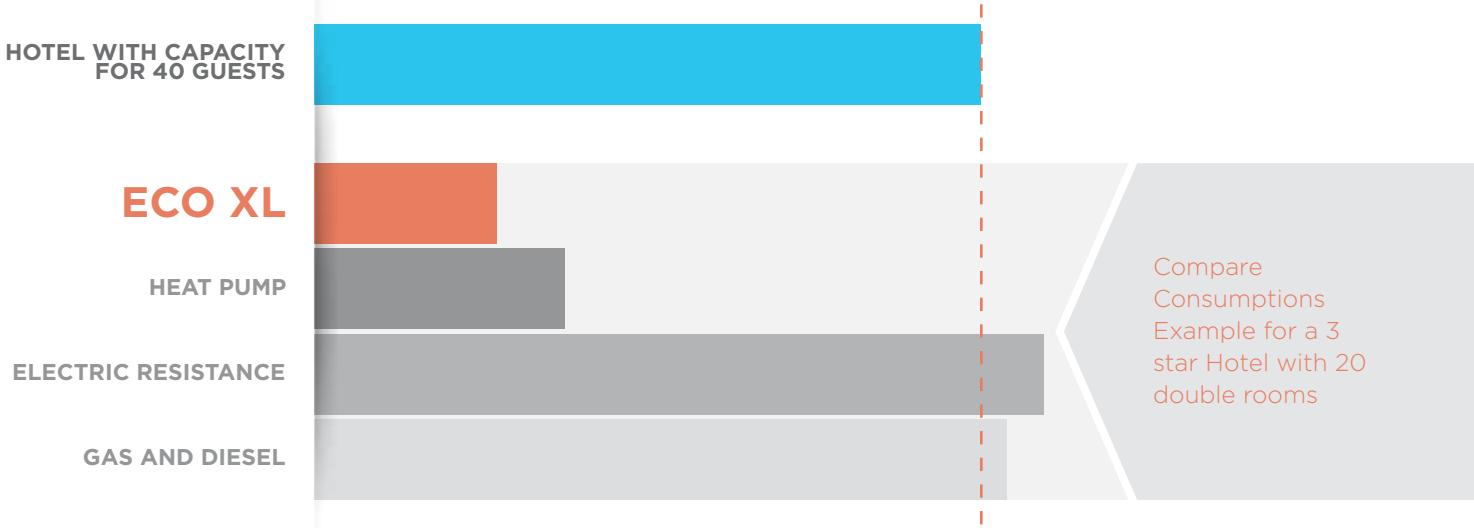
Electronic controller Inside

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

Energy Diagram

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



RENEWABLE ENERGY

ECO XL

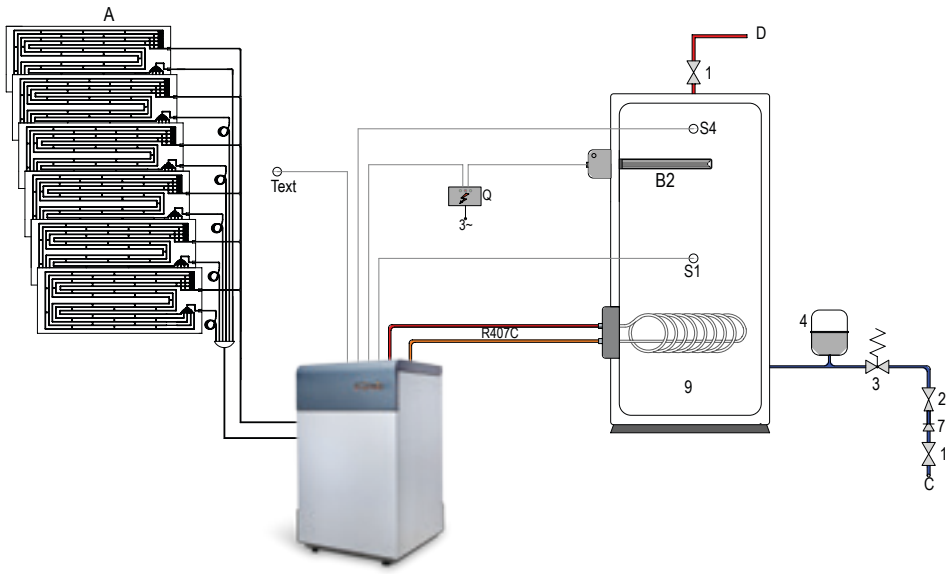
Thermodynamic Solar Solution to heat domestic water for industrial use

Equipment with 6 to 40 solar panels.
Capacities of 1000 to 6000 litres.
Polywarm or Stainless Steel Cylinders

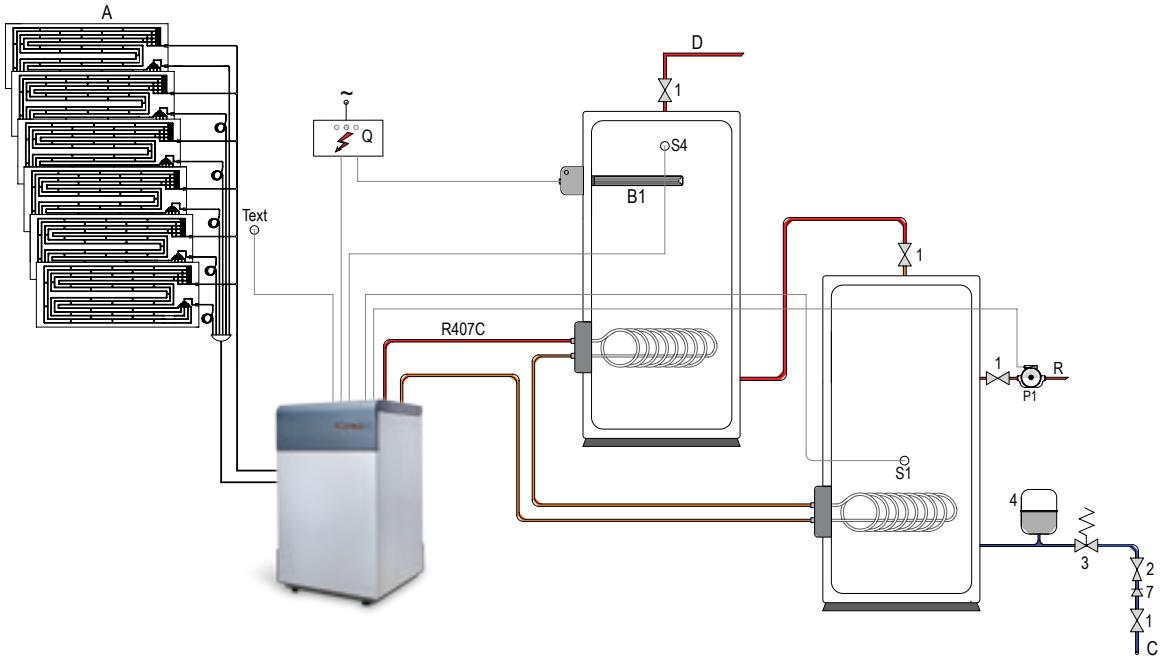
ECO XL

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



ECO XL
Installation with 2 Cylinders in Series



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

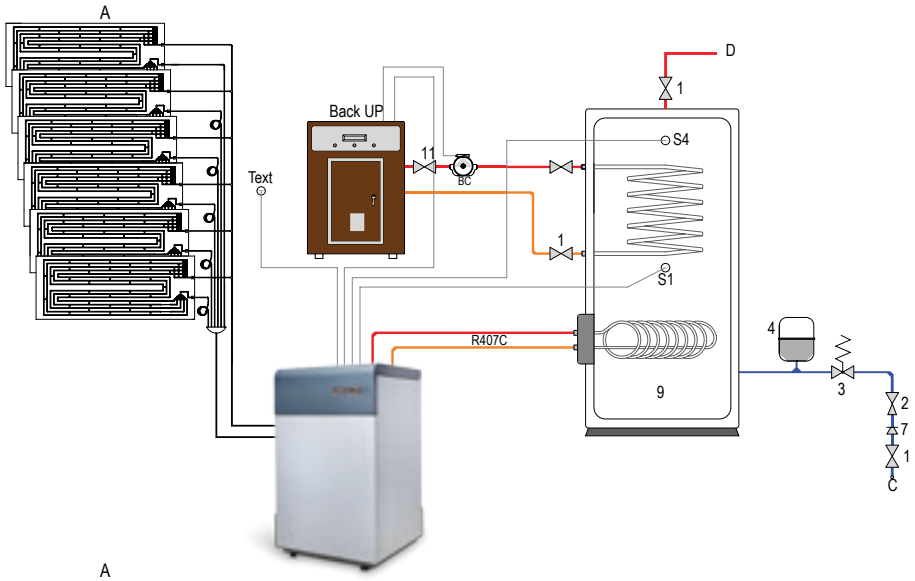
Example

ECO 3000 WXD 28 T ECO of 3000 litre capacity with 2 Polywarm cylinders with a high productivity exchanger, 28 panels, three-stage 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.

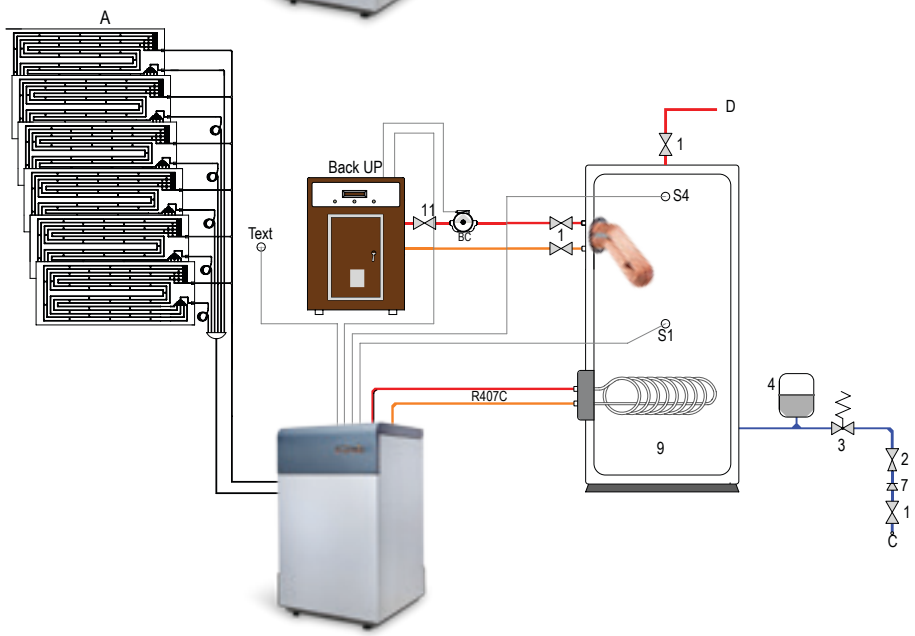
ECO XL

Stainless Steel Cylinder Installation with Boiler support



ECO XL

Polywarm Steel Cylinder Installation with Boiler Support



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 or 6000 litres
3. **Cylinder Material**
   w (Polywarm)
   i (Stainless)

*4. **Supplementary Coil (Stainless Cylinders) or High Productivity Exchanger (Polywarm Cylinder)**
   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

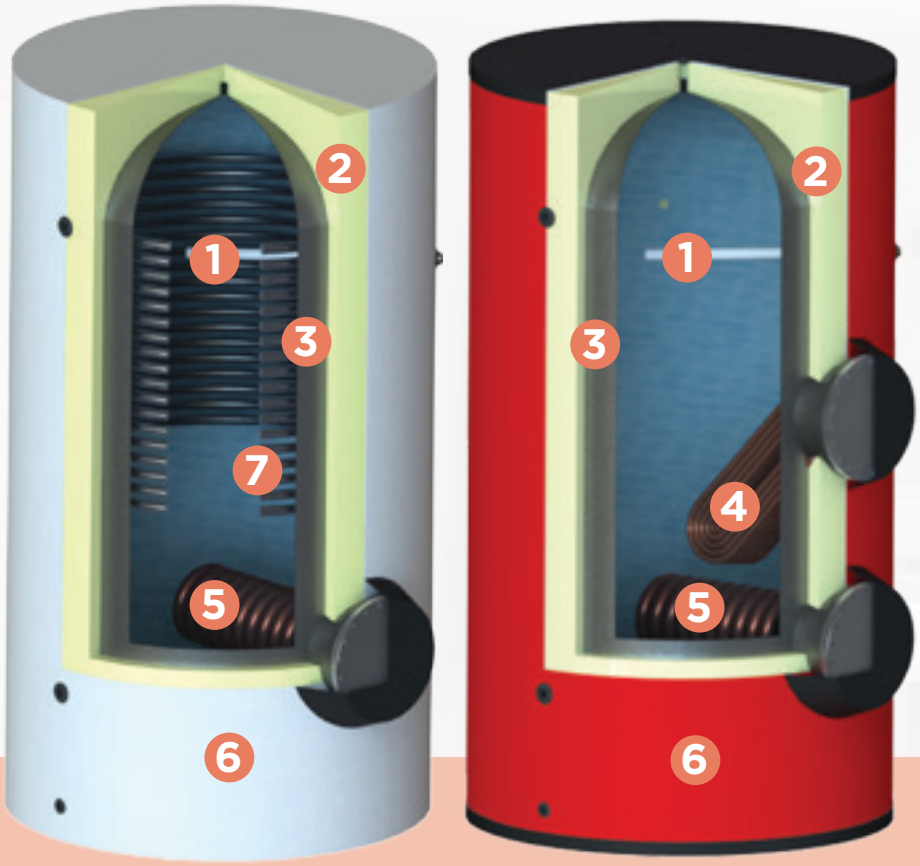
HOTELS, HOSPITALS, SCHOOLS, SPORTS HALLS, INDUSTRY WITH **DOMESTIC ECONOMY**

MINIMUM OF CO2 EMISSIONS (KYOTO PROTOCOL)

- 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. Copper water/water heat exchanger
5. Finned tube heat exchanger
6. Outside coating
7. Water/water serpentine heat exchanger



Versions with 1 or 2 Cylinders

Polywarm or Stainless Steel 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

- 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 W 88

1000 to 2000

1 Polywarm Cylinder with Simple Flange
1 High Efficiency Finned Tube Heat Exchanger
1 Solar Block

ECO 8888 WX 88

1000 to 2000

1 Polywarm Cylinder with Double Flange
1 High Efficiency Finned Tube Heat Exchanger
1 Water/Water Copper Heat Exchanger
1 Solar Block

ECO 8888 I 88 e 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

ENERGIE
THERMODYNAMIC SOLAR ENERGY

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

ECO 8888 WD 88

2000 to 6000

2 Polywarm Cylinders with Simple Flange
2 High Productivity Helical Exchangers in Copper (Fridge Liquid)
1 Solar Block

ECO 8888 WXD 88

2000 to 6000

1 Polywarm Cylinder with Simple Flange
1 Polywarm Cylinder with Double Flange
2 High Efficiency Finned Tube Heat Exchangers
1 Water/Water Copper Heat Exchanger
1 Solar Block

ECO 8888 ID 88 e ECO 8888 IXD 88

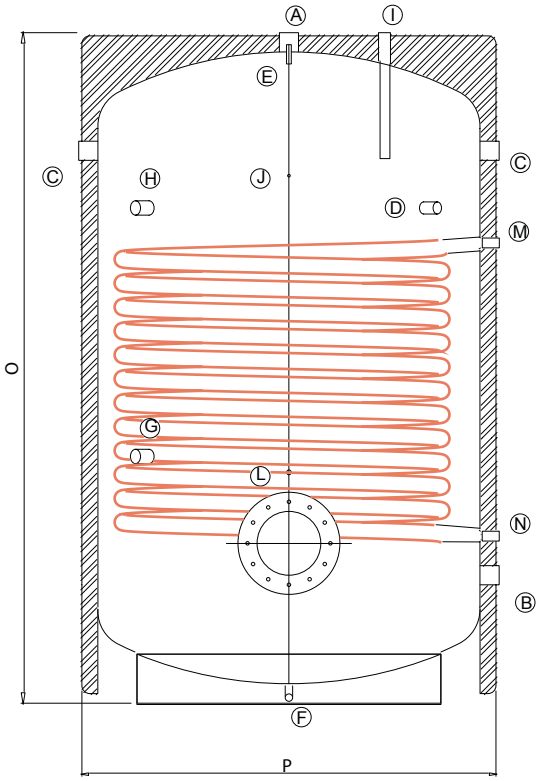
2000 to 6000

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

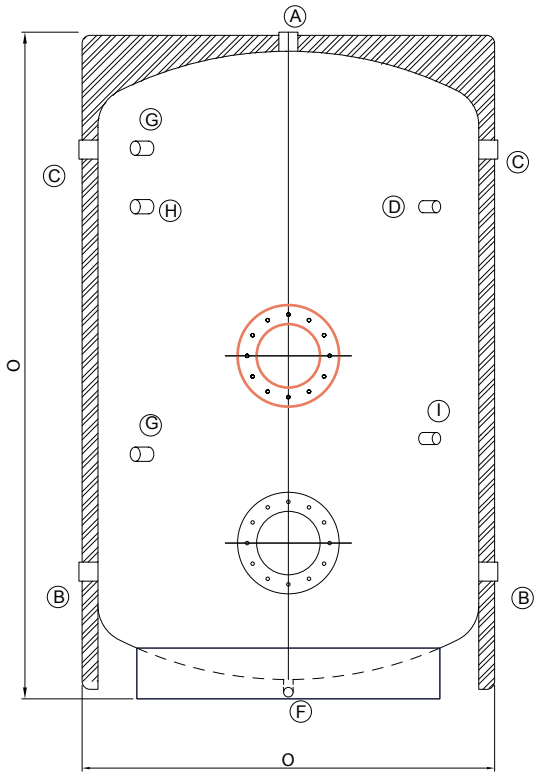
Model	Litres	Solar Block
Eco 2000	2x1000	12, 16
Eco 3000	2x1500	16, 28
Eco 4000	2x2000	28
Eco 6000	2x3000	40

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

STAINLESS Cylinder



POLYWARM Cylinder



According to model selected

Letter	1000 l Stainless | Polywarm	1500 l Stainless | Polywarm	2000 l Stainless | Polywarm	3000 l Stainless | Polywarm
A	1"1/4 F | 1"1/2 F	1"1/2 F | 2"F	2" F | 2"F	2" F | 2"F
B	1"1/4 F | 1"1/2 F	1"1/2 F | 1"1/2 F	2"F | 2"F	2"F | 2"F
C	1"1/4 F | 1"1/2 F	1"1/2 F | 1"1/2 F	2"F | 2"F	2" F | 2"F
D	1"1/4 F | -	1"1/4 F | 1"1/4 F	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 | 3/4"F	1"F | 1"F	1" F | 1" F	1" F | 1"F
G	1/2"F | 1/2"F	1/2" F | 1/2" F	1/2" F | 1/2" F	1/2" F | 1/2" F
H	1/2" F | 2" F	1/2" F | 2" F	1/2"F | 2"F	1/2" F | 2" F
I	1" F | 1"1/4 F	1"1/4 F | 1"1/4 F	1"1/4 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 | 2192mm	2100mm | 2497mm	2160mm | 2574mm	2300mm | 2917mm
P	930mm | 950 mm	1140mm | 1050mm	1300mm | 1200mm	1500mm | 1350mm

Note: Technical drawing of the Solar Block on page 54

DURATION OF THE HEATING CYCLE

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

*A7/W10-W50

Model	Units	Eco 1000	Eco 1500	Eco 2000	Eco 3000	Eco 4000	Eco 6000
Solar Panels	Nb.	6	12	12 / 16	16 / 28	28	40
Nominal Capacity	l	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	Nb.	1	1	1 ou 2	1 ou 2	2	2
Users*	Nb.	22	34	45	68	90	135

*Considering an average consumption of 50 litres / persons.day

Polywarm Cylinders

Name	Nominal Capacity	Cylinder	Panels	Coil	Electrical Suply*
Eco 1000W6	1000	Polywarm	6	No	S/T
Eco 1000WX6	1000	Polywarm	6	Yes	S/T
Eco 1500W12	1500	Polywarm	12	No	S/T
Eco 1500WX12	1500	Polywarm	12	Yes	S/T
Eco 2000W12	2000	Polywarm	12	No	S/T
Eco 2000WX12	2000	Polywarm	12	Yes	S/T
Eco 2000WD12	2 × 1000	Polywarm	12	No	S/T
Eco 2000WXD12	2 × 1000	Polywarm	12	Yes	S/T
Eco 2000W16	2000	Polywarm	16	No	S/T
Eco 2000WX16	2000	Polywarm	16	Yes	S/T
Eco 2000WD16	2 × 1000	Polywarm	16	No	S/T
Eco 2000WXD16	2 × 1000	Polywarm	16	Yes	S/T
Eco 3000W16	3000	Polywarm	16	No	S/T
Eco 3000WX16	3000	Polywarm	16	Yes	S/T
Eco 3000WD16	2 × 1500	Polywarm	16	No	S/T
Eco 3000WXD16	2 × 1500	Polywarm	16	Yes	S/T
Eco 3000W28	3000	Polywarm	28	No	T
Eco 3000WX28	3000	Polywarm	28	Yes	T
Eco 3000WD28	2 × 1500	Polywarm	28	No	T
Eco 3000WXD28	2 × 1500	Polywarm	28	Yes	T
Eco 4000WD28	2 × 2000	Polywarm	28	No	T
Eco 4000WXD28	2 × 2000	Polywarm	28	Yes	T
Eco 6000WD40	2 × 3000	Polywarm	40	No	T
Eco 6000WXD40	2 × 3000	Polywarm	40	Yes	T

Stainless Steel Cylinders

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

* S - Single-Phase / T - Three-Phase

Advantages in acquiring a Solar Block for Central Heating:

- LOW CO2 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

CENTRAL HEATING

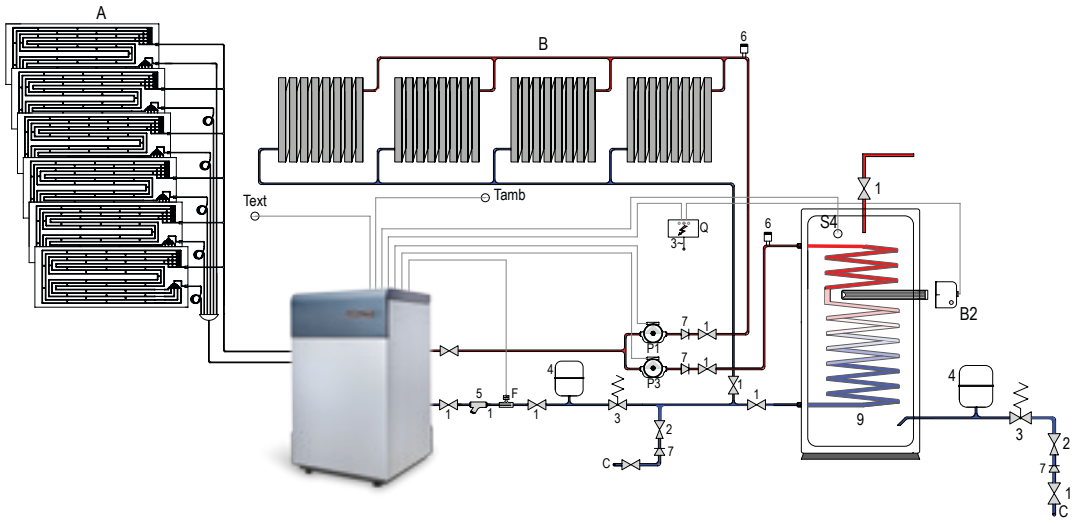
Thermodynamic Solar Solution for central heating

Equipment with 6 to 40 solar panels

CENTRAL HEATING

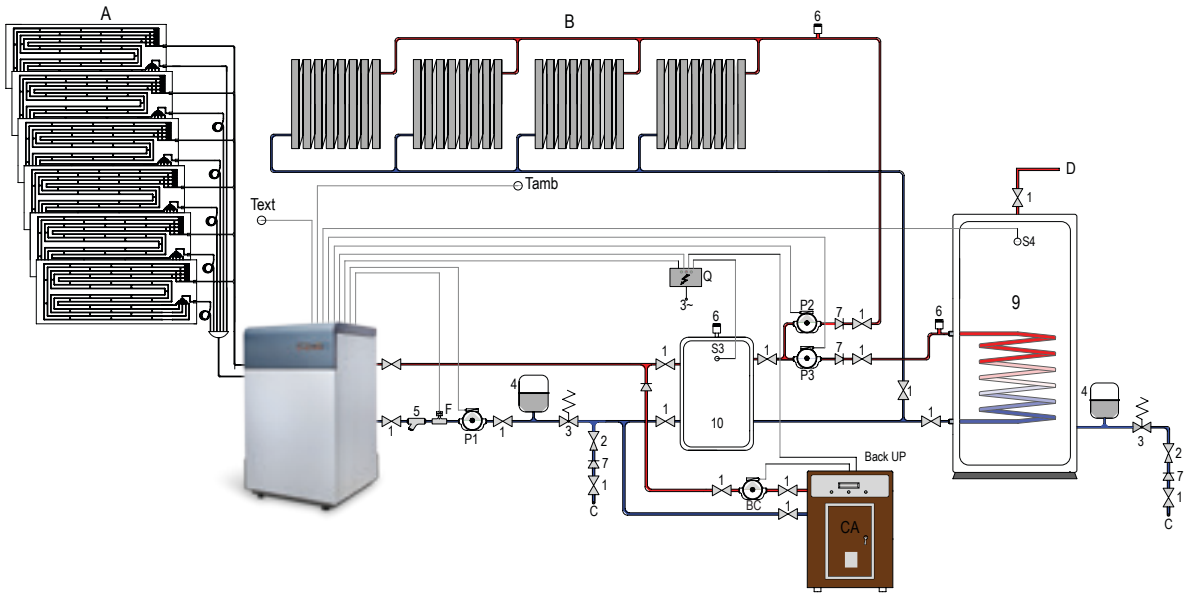
Central heating

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

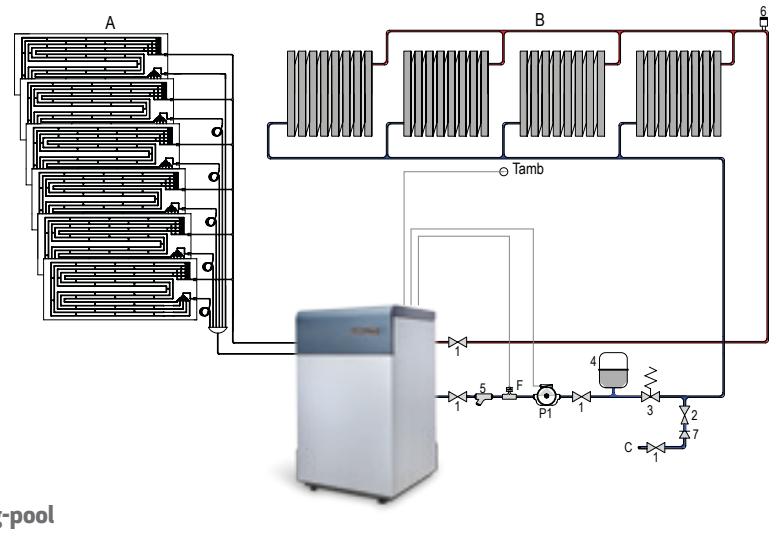
Choose your model

SOLAR BLOCK 88 PLUS 888 A

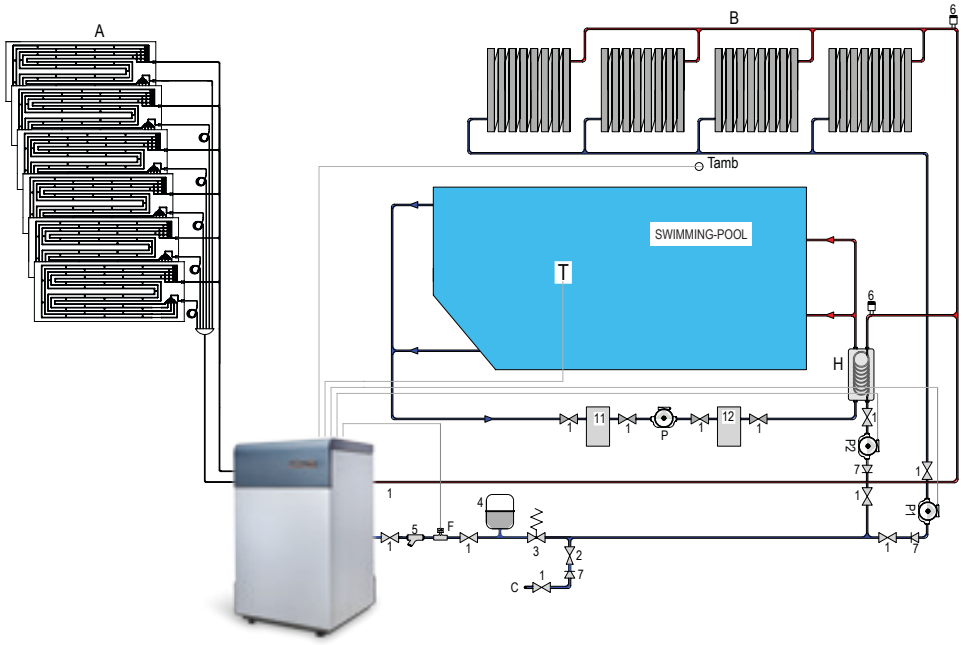
1 2 *3 *4 5

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**
Central 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
T Three-Phase

* Only for the Combined Solution if applicable

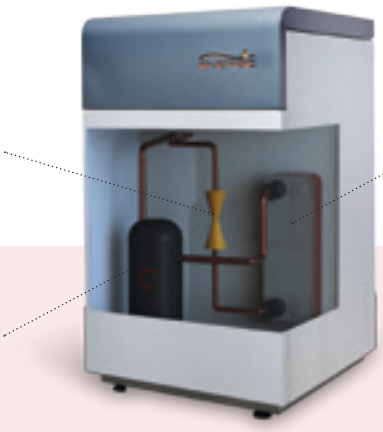
COMFORT, CONVENIENCE WITH **MAXIMUM ECONOMY**

WARRANTY 10 YEARS SOLAR PANEL

Check warranty conditions

- SUPER EFFICIENT ENVIRONMENT HEATING AT LOW TEMPERATURE
- 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 55ºC 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 Simplified representative diagram

Technical drawing of Solar Block on page 54

Specifications

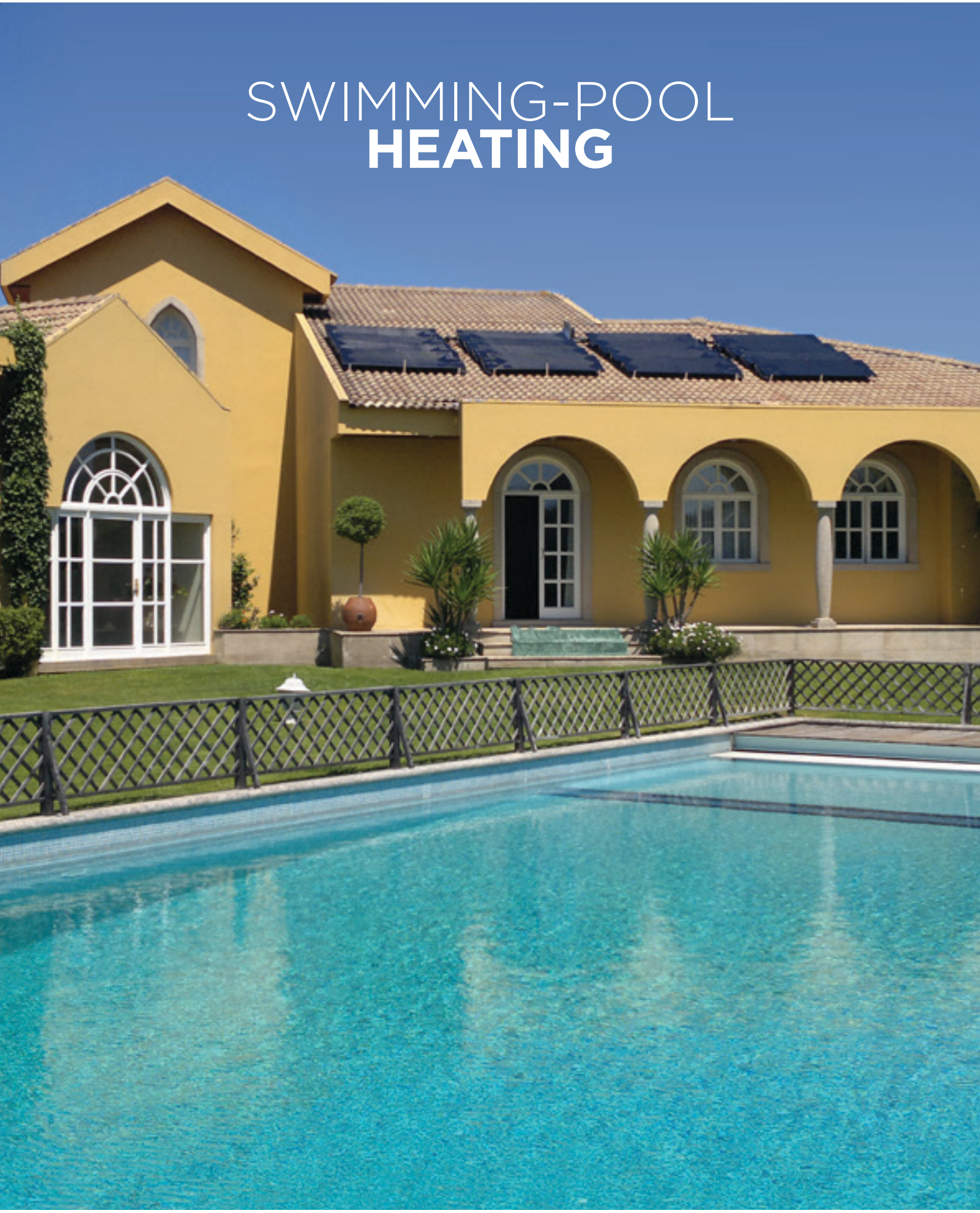
Model		Solar Block 6	Solar Block 12	Solar Block 16	Solar Block 28	Solar Block 40
Solar Panels	Nr.	6	12	16	28	40
Maximum Thermal Power.	W	7500	16580	24210	38220	54600
Power Consumption Min.	W	1230	2010	3210	5650	8450
Water Flow	m³/h	0,7	1,0	1,5	3,0	5,0
Pressure Drop	kPa	3,0	9	7	11	36
Electrical Supply		1~/ 230V / 50 Hz ou 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	Panels	Area to be heated*	Cylinder	Electrical Supply
Solar Block 6	6	90 m²	-	230V ou 400V
Solar Block 12	12	150 m²	-	230V ou 400V
Solar Block 16	16	220 m²	-	230V ou 400V
Solar Block 28	28	300 m²	-	400V
Solar Block 40	40	450 m²	-	400V
Solar Block 6 Plus	6	90 m²	200	230V ou 400V
Solar Block 12 Plus	12	150 m²	300	230V ou 400V
Solar Block 16 Plus	16	220 m²	300	230V ou 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.

SWIMMING-POOL **HEATING**



RENEWABLE ENERGY

SWIMMING-POOL HEATING

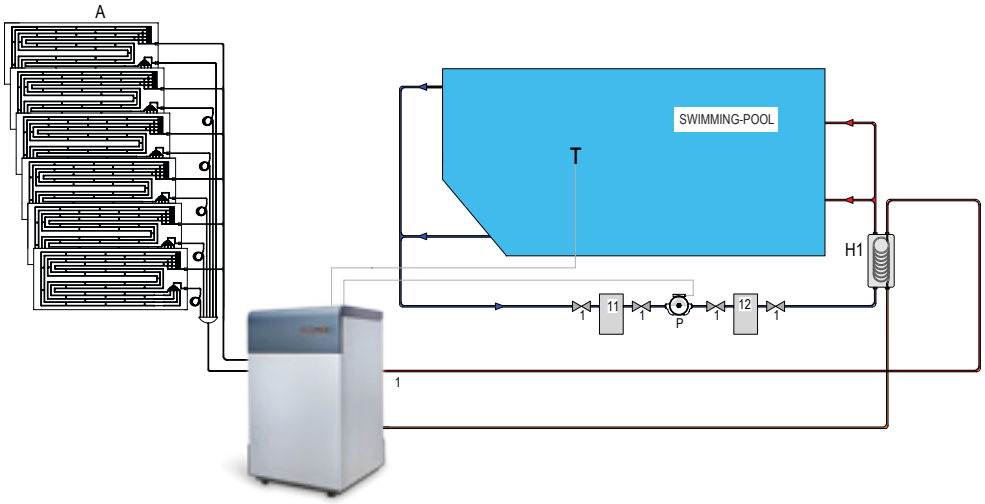
Thermodynamic Solar Solution for Swimming-pools

Equipment from 6 up to 40 solar panels

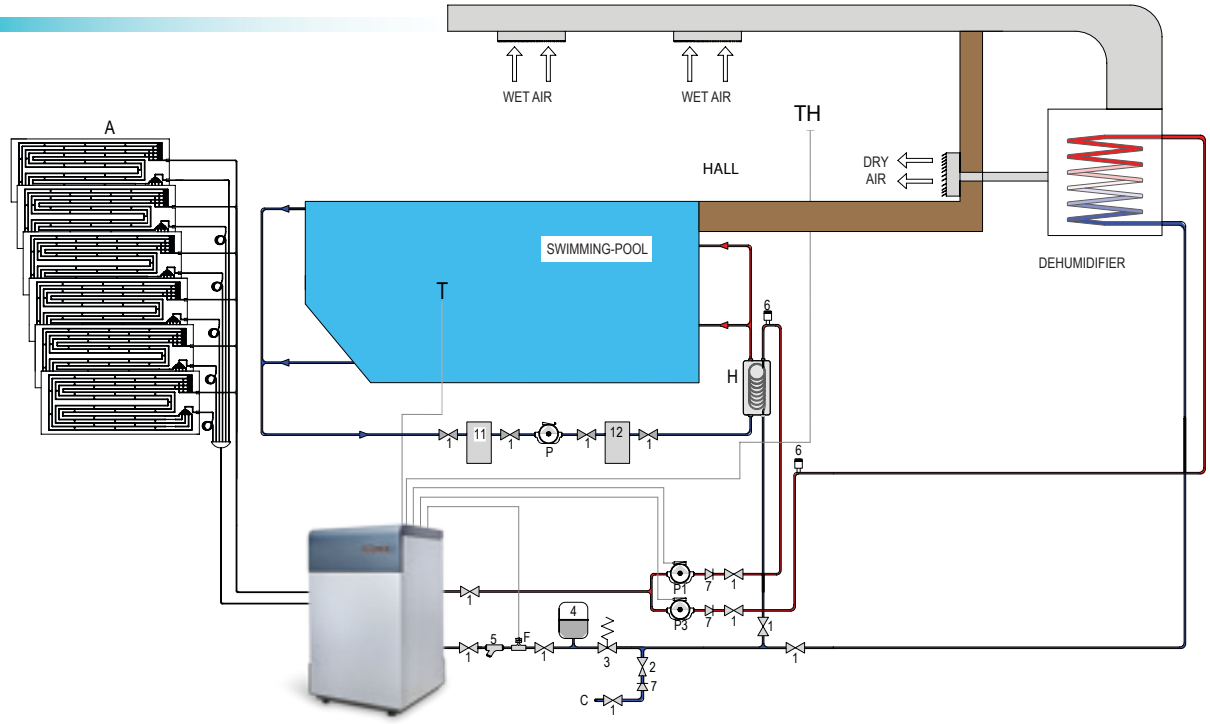
SWIMMING-POOL HEATING

ENERGIE THERMODYNAMIC SOLAR ENERGY

Swimming-pool Heating
Standard Installation



Swimming-pool + Dehumidifier
Combined Solution



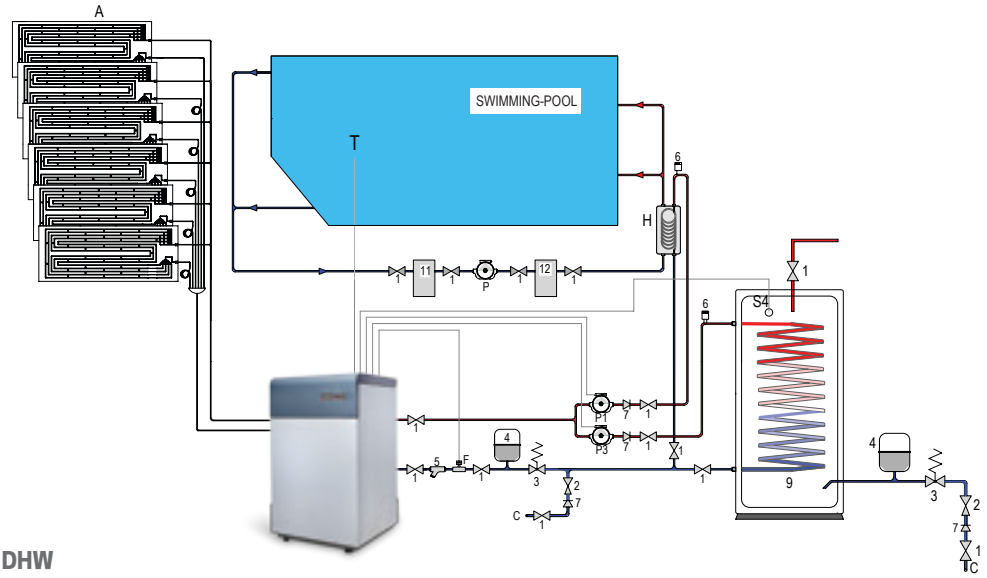
1 Shut-off Valve	6 Drain Valve	C Cold Water Inlet	T Thermostat
2 Pressure Reducer	7 Check Valve (non-return)	F Flow Switch	G Swimming-pool
3 Security Valve	11 Pre-filter	P1 Circulating Pump 1	H Water/water titanium heat exchanger
4 Expansion Valve	12 Filter	P2 Circulating Pump 2	TH Thermo-Hygrometer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

Choose your model

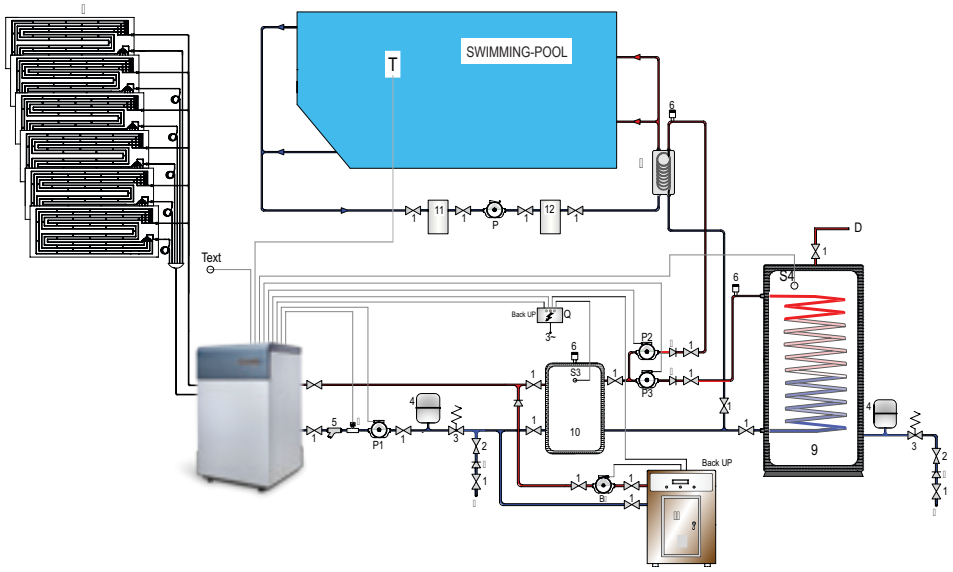
SOLAR BLOCK 88 PLUS 888 A

1 2 *3 *4 5

Swimming-pool + DHW
Combined Solution



Swimming-pool + DHW
Combined Solution with backup



1	Shut-off Valve	9	Thermal Storage	F	Flow Switch	T	Thermostat
2	Pressure Reducer	10	Buffer Tank	P1	Circulating Pump 1	BC	Boiler Circulator Pump
3	Security Valve	11	Pre-filter	P2	Circulating Pump 2	Q	Control Box
4	Expansion Valve	12	Filter	P3	Circulating Pump 3	G	Swimming-pool
5	Filter	A	Thermodynamic Solar Panels	S3	Temperature Sensor S3	H	Water/water titanium heat exchanger
6	Drain Valve	C	Cold Water Inlet	S4	Temperature Sensor S4	H1	Gas/Water Titanium Heat Exchanger
7	Check Valve (non-return)	D	Hot Water Outlet	Text	Outside Thermostat		

1 Model
Swimming-pool Heating Solar Block

2 Numbers of Solar Panels
6, 12, 16, 28, or 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 S Single-Phase Version
T Three-Phase Version

* Only for the Combined Solution if applicable

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

Note Simplified representative diagram

Technical drawing of the Solar Block on page 54

SPECIFICATIONS

Model		Solar Block 6	Solar Block 12	Solar Block 16	Solar Block 28	Solar Block 40
Solar Panels	Nr.	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 ou 3~/ 400V / 50 Hz			3~/ 400V / 50 Hz	
Protection (M/T)*	A	16/6	25/10	2x16/6	20	25
Gross Weight	kg	48	96	128	210	320

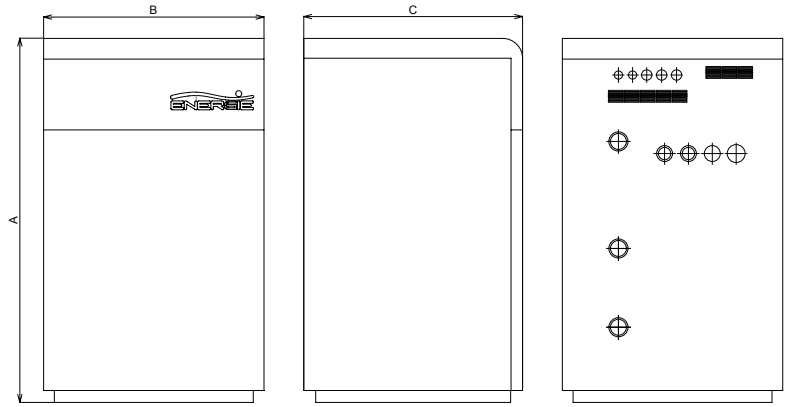
*Magnetothermic protection switch (S, for the Single-phase version and T, for the Three-phase version) to be fitted by the installer.

Model	Panels	Volume to be heated *	Cylinder	Electrical Supply
Solar Block 6	6	25 m^2	-	230V ou 400V
Solar Block 12	12	55 m^2	-	230V ou 400V
Solar Block 16	16	80 m^2	-	230V ou 400V
Solar Block 28	28	150 m^2	-	400V
Solar Block 40	40	180 m^2	-	400V
Solar Block 6 Plus	6	25 m^2	200	230V or 400V
Solar Block 12 Plus	12	55 m^2	300	230V or 400V
Solar Block 16 Plus	16	80 m^2	300	230V or 400V
Solar Block 28 Plus	28	150 m^2	500	400V
Solar Block 40 Plus	40	180 m^2	500	400V

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

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

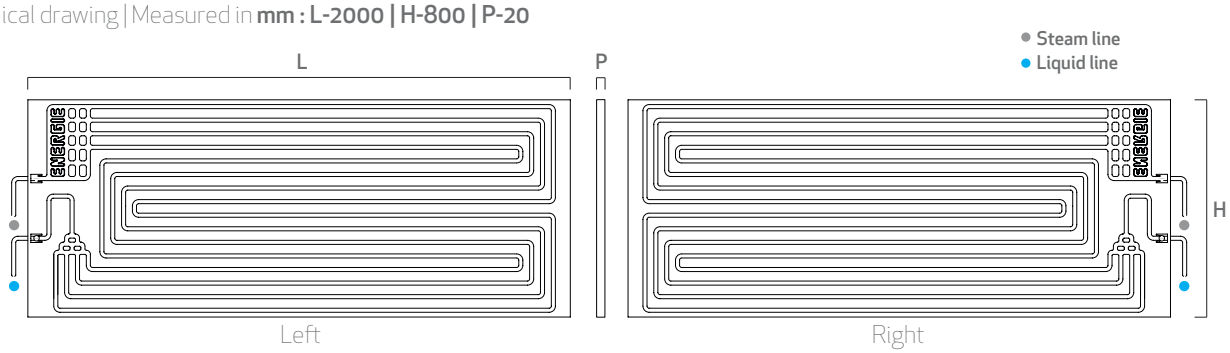
Technical drawing



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

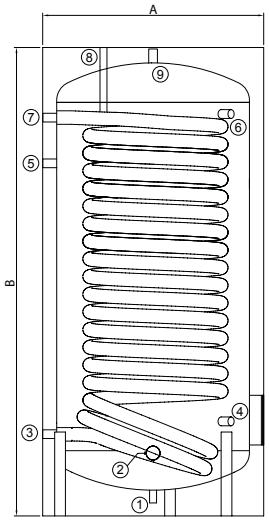
LEFT AND RIGHT THERMODYNAMIC SOLAR PANEL

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



	200	300	500
A	550	650	750
B	1440	1492	1792
1	1 1/4"F	1 1/4"F	1 1/4"F
2	3/4"F	1"F	1"F
3	1"F	1"F	1"F
4	1/2"F	1/2"F	1/2"F
5	3/4"F	3/4"F	3/4"F
6	1/2"F	1/2"F	1/2"F
7	3/4"F	1"F	1"F
8	1 1/4"F	1 1/4"F	1 1/4"F
9	1 1/4"F	1 1/4"F	1 1/4"F


ENERGIE®
THERMODYNAMIC SOLAR ENERGY
AEROTHERMAL
ENERGY

AQUAPURA
HEAT PUMPS FOR DOMESTIC WATER HEATING

ENERGIE PRESENTS

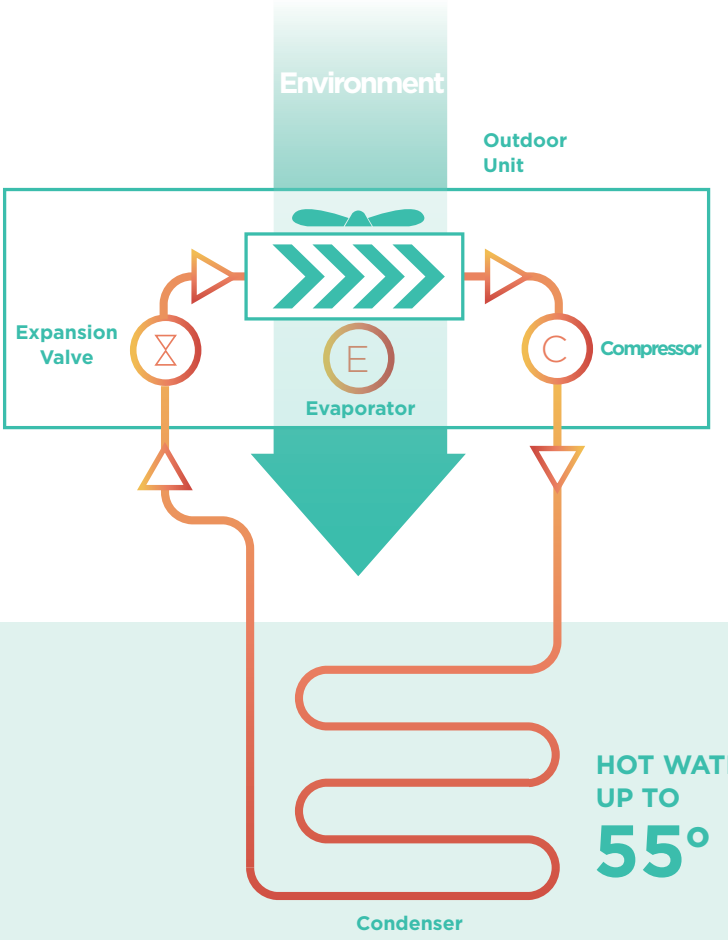
AQUAPURA SPLIT
AQUAPURA MONOBLOC

AQUAPURA

ENERGIE
THERMODYNAMIC SOLAR ENERGY

AQUAPURA

It is a system designed to get an optimal regulation of domestic water heating. The heat pump is a modern, efficient and clean solution that guarantees comfort in your home, always respecting the environment. It is an intelligent way of using nature's resources in order to improve your quality of life. In adopting this solution you will be making a serious commitment in terms of reducing harmful emissions to our atmosphere thus contributing to the natural balance of the planet.



AQUAPURA SPLIT
AQUAPURA MONOBLOC

HOT WATER UP TO 55°

Operating principle

There is a cooling liquid that is pumped to an outdoor heat exchanger (evaporator).
Here the liquid, with the help of a fan, absorbs the energy from the atmosphere to the temperature differential obtained outdoors. During this process, the liquid changes to a gaseous state.
The gaseous state is sucked in by the mechanical part of the system, the compressor. Here it is compressed, the pressure goes up and consequently the liquid temperature increases. After this, the liquid travels to a second inside heat exchanger (condenser) and transfers heat to the water in the cylinder.
The fluid goes into liquid state by cooling down. The liquid pressure is reduced due to a strangulation that happens in the expansion valve and the process starts again.

75%
OF FREE ENERGY

EFFICIENT HOT WATER SOLUTIONS OF SIMPLE INSTALLATION

ADVANTAGES AQUAPURA SPLIT

- SMALL SPACE REQUIRED. ONLY THE CYLINDER STAYS INSIDE THE HOUSE
- ABSOLUTE SILENCE INSIDE YOUR HOME
- VARIOUS CAPACITIES, MODELS WITH AND WITHOUT SUPPLEMENTARY COIL

ADVANTAGES AQUAPURA MONOBLOC

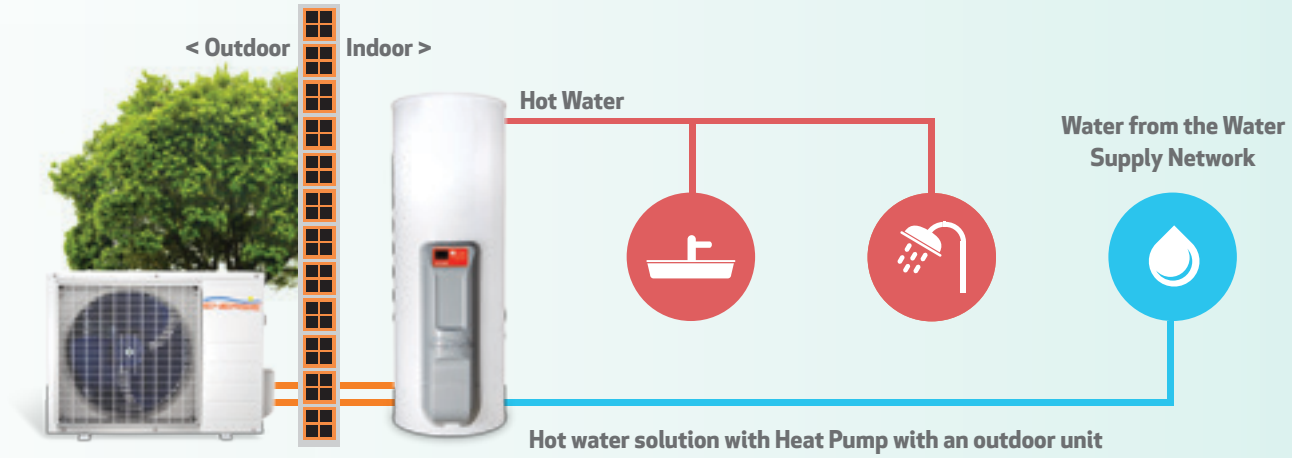
- SIMPLE INSTALLATION SIMILAR TO A THERMAL STORAGE
- POSSIBILITY OF DEHUMIDIFYING AND/OR COOLING DOWN SMALL SPACES
- VARIOUS CAPACITIES, MODELS WITH OR WITHOUT SUPPLEMENTARY COIL

AQUAPURA SPLIT

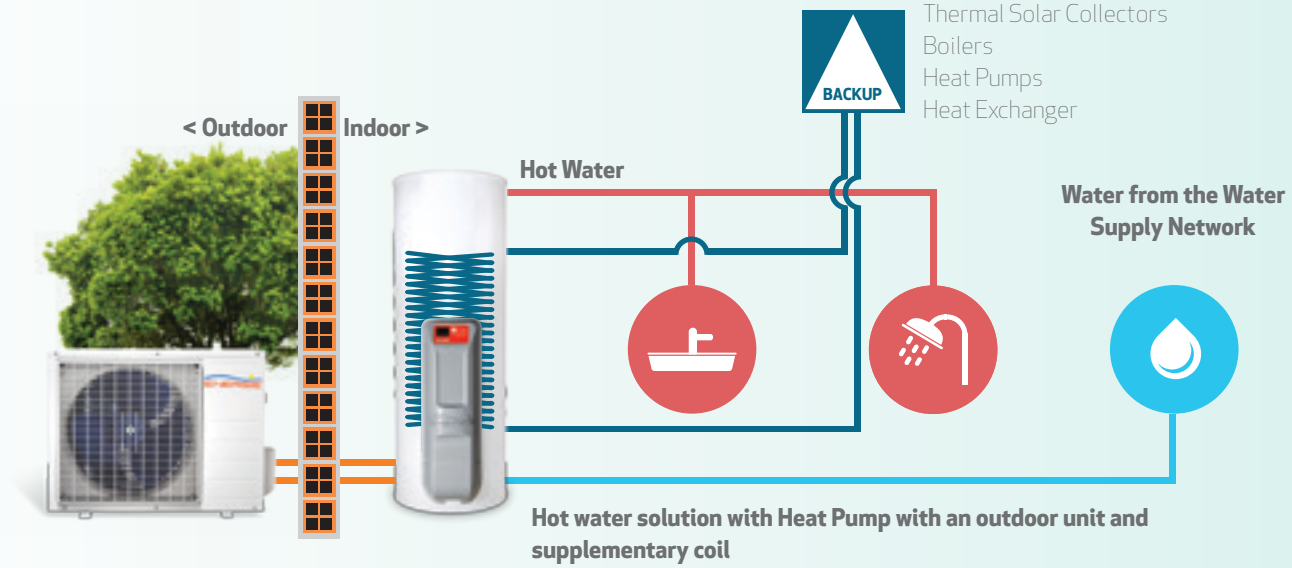
Domestic Hot Water

Heat Pumps to heat Domestic Water

AQUAPURA SPLIT



Hot water solution with Heat Pump with an outdoor unit



Hot water solution with Heat Pump with an outdoor unit and supplementary coil

ELECTRONIC CONTROLLER

Button	Function
ON/OFF CANCEL	(ON/OFF)
	(CANCEL)
OK	(OK) Confirmation
	(LOCK) Lock/ Unlock
MENU	MENU
COMP	ON/OFFCompressor
E-HEATER	ON/OFF Electrical resistance
COMP	Change Values
E-HEATER	Go through Menus/Submenus
DISINFECT	(DISINFECT)Anti-legionella

- 3 DISTINCT OPERATING MODES
- 2 FUNCTIONALITIES
- ALLOWS TEMPERATURE DISPLAY
- ELECTRICAL SUPPORT
- TIME PROGRAMMING
- KEYBOARD LOCK

EFFICIENCY **AND SILENCE**

WARRANTY 5 YEARS CYLINDER

Check warranty conditions

- SILENCE AT HOME
- WITHOUT DUCTS
- REDUCED HEATING TIME
- LOW MAINTENANCE
- OUTSIDE THE CYLINDER CONDENSER (NO CONTACT WITH WATER)
- IMPROVEMENT OF THE ENERGY CLASSIFICATION OF THE BUILDING
- OPERATION TIME PROGRAMMING
- EFFICIENT FUNCTIONING EVEN AT LOW TEMPERATURES OUTDOORS
- EFFICIENCY AND SILENCE

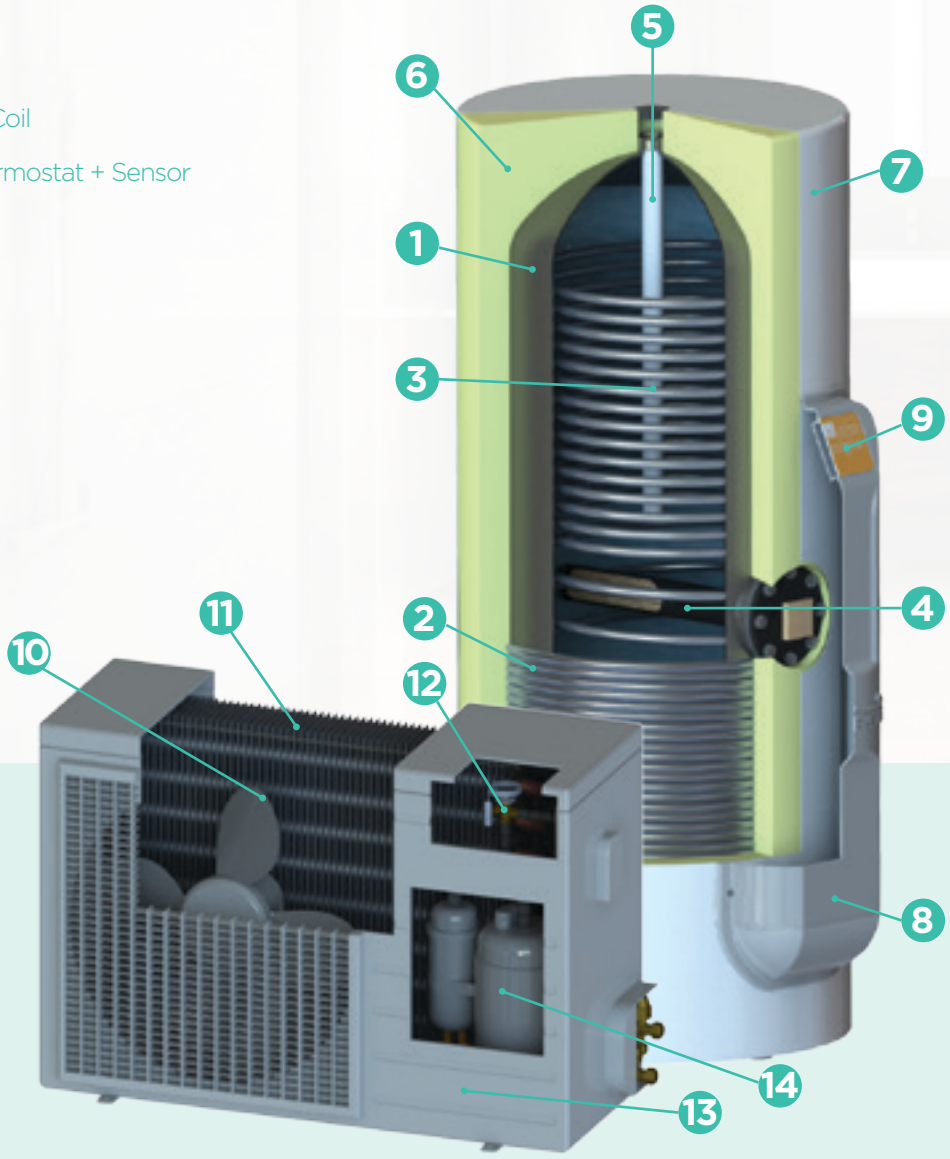
COP 3,5

MAXIMUM EFFICIENCY

According to EN255
COP 2,9 according to EN16147 A7/W10-W55

ENERGIE
THERMODYNAMIC SOLAR ENERGY

1. DHW Cylinder
2. Condenser (Coil)
3. Optional Supplementary Coil
4. Ceramic Resistance + Thermostat + Sensor
5. Magnesium Anode
6. High Density Insulation
7. Outside Coating
8. Split Cover
9. Electronic Controller
10. Ventilator
11. Evaporator
12. Expansion Valve
13. Unit box
14. Compressor



THE PERFECT SYMBIOSIS

Outdoor Unit
High productivity
Low noise emission
High performance
Robust
Easy installation

Electronic Controller
Easy to use
Intuitive
High resolution LCD screen
Total control of Equipment

Insulation
High density Polyurethane
High thermal resistance
High mechanical resistance

Condenser
High thermal conductivity
Outside the cylinder (no contact with water)
High contact area with cylinder (favouring thermal transfer)

Characteristics
Adjustable support leg
Outdoor aluminium plate
Electrical support to meet the need for bigger consumption
Protection anode against corrosion
Safety thermostat

Cylinder
Stainless Steel or Enamelled Cylinder
High to corrosion Mechanical Robustness
High dimension precision in the hydraulic connections

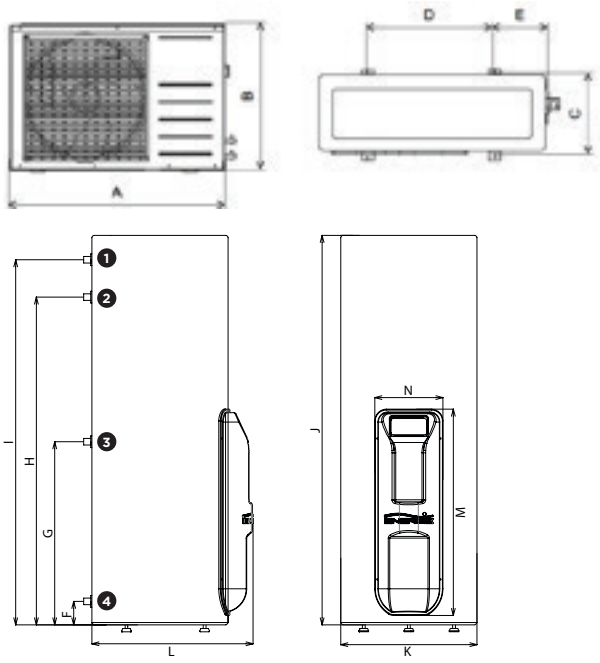
Split Heat Pump
standard version

Specifications		Aquapura Split 200esm	Aquapura Split 250i /250esm	Aquapura Split 300i
Nominal Capacity	l	200	250	300
Thermal Power (Med/Max)	W	1920/3200	1920/3200	1920/3200
Power Consumption (Med/Max)	W	600/1000	600/1000	600/1000
Temperature (Factory Setpoint)	°C	52	52	52
Maximum Temperature	°C	80	80	80
Max. Amount of water at 40°C in a run (St./En.)	l	-/290	330/345	375/-
Maximum Operation Pressure	bar	6	6	6
Sound Power Level	dB	33	33	33
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/-
Electrical Supply	V/Hz	230/50	230/50	230/50

LOW-COST EFFICIENT SOLUTION
SILENCE AT HOME

COP 3,5

Technical drawing



Dimensions	Outdoor Unit
A	700
B	525
C	250
D	458
E	120

Dimensions	200esm	250i/250esm	300i
F	74	74	74
G	650	815	815
H	1146	1326	1543
I	1274	1454	1671
J	1350	1530	1750
K	580	580	580
L	685	685	685
M	879	879	879
N	290	290	290

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)	-

With flares valves on the split unit and on the cylinder
With dielectric threads for water connections

ENERGIE
THERMODYNAMIC SOLAR ENERGY

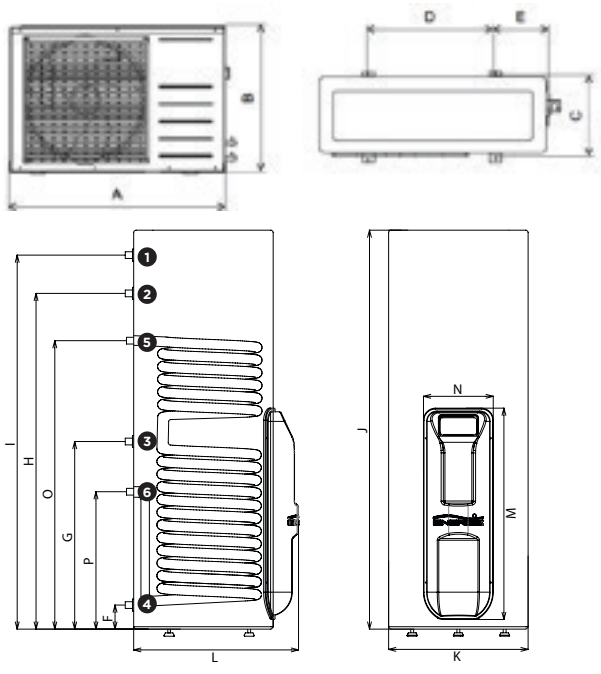
Split Heat Pump
with Supplementary Coil

Specifications		Aquapura Split 250ix	Aquapura Split 300ix
Nominal Capacity	l	250	300
Thermal Power (Med/Max)	W	1920/3200	1920/3200
Power Consumption (Med/Max)	W	600/1000	600/1000
Temperature (Factory Setpoint)	°C	52	52
Maximum Temperature	°C	80	80
Max. Amount of water at 40°C in a run (St.)	l	325	370
Maximum Operation Pressure	bar	6	6
Sound Power Level	dB	33	33
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.)	Kg	69	81
Electrical Supply	V/Hz	230/50	230/50

LOW-COST EFFICIENT SOLUTION
SILENCE AT HOME

COP 3,5

Technical drawing



Dimensions	Outdoor Unit
A	700
B	525
C	250
D	458
E	120

Dimensions	250ix	300ix
F	74	74
G	815	815
H	1326	1593
I	1451	1671
J	1530	1740
K	580	580
L	685	685
M	879	879
N	290	290
O	1251	1251
P	681	681

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)	1" Male
6 (Coil Outlet)	1" Male

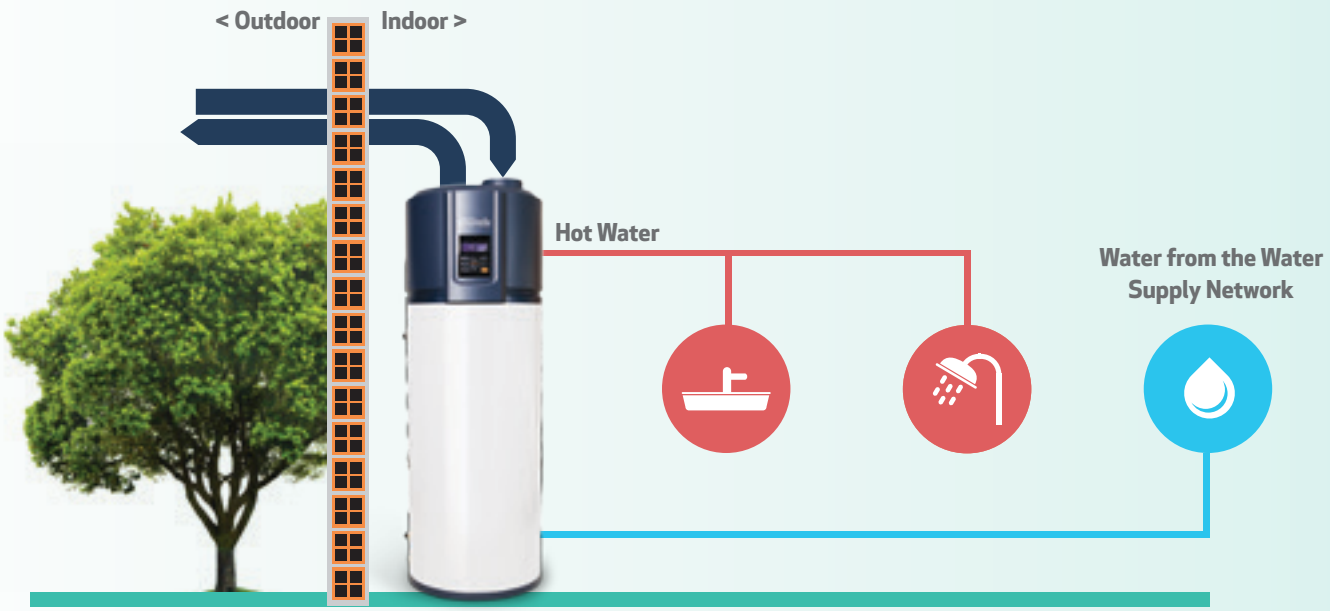
With flares valves on the split unit and on the cylinder
With dielectric threads for water connections

AQUAPURA MONOBLOC

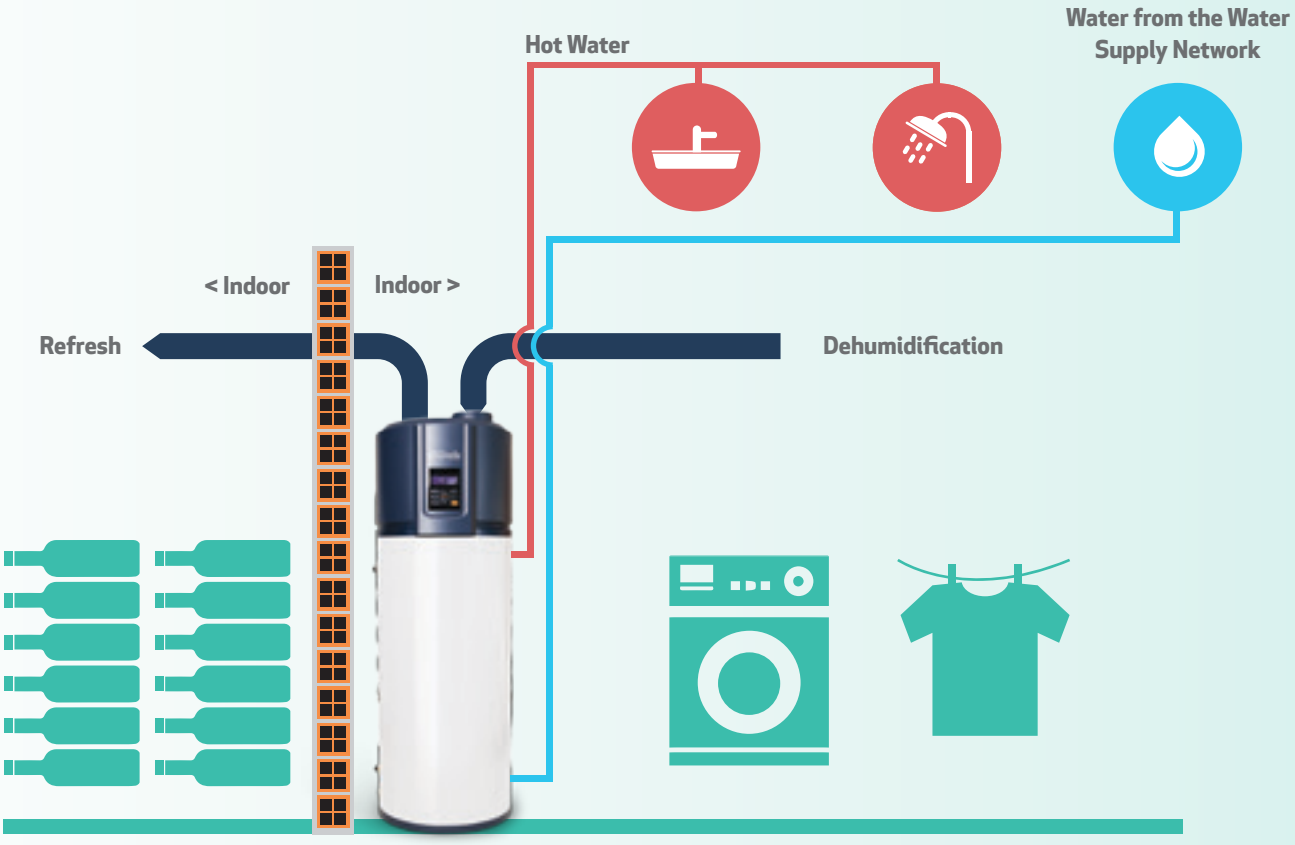
Domestic Hot Water

Heat pumps to heat Domestic Water

AQUAPURA MONOBLOC



Standard Installation



Installation with dehumidification and refreshing of the space

ELECTRONIC CONTROLLER

Button	Function
E-HEATER	ON/OFF of Electrical support
VACATION	Activate/Programme holiday setting
DISINFECT	Activate/Programme the disinfection function
▲	Increase temperature, time, holidays, etc.
ENTER Press 3 seconds for lock/unlcok	Select/Execute and unlock
▼	Decrease temperature, time, holidays, etc
CLOCK / TIMER	Program the clock and timer
CANCEL	Cancel Introduction/Exit
ON/OFF	Turn on/Turn off System Led Information on the state of the system (turned on/turned off)

The equipment always functions in economy setting by default.

- ALLOWS TEMPERATURE DISPLAY
- CONTROL OF THE AUXILIARY THERMAL SOLAR SYSTEM
- HOLIDAY SETTING
- ELECTRICAL SUPPORT
- ANTI-LEGIONELLA CYCLE
- TIME PROGRAMMING
- KEYBOARD LOCK

AQUAPURA MONOBLOC

WARRANTY 5 YEARS CYLINDER

Check warranty conditions

- SIMPLE INSTALLATION
- DUCTS PROVIDE DEHUMIDIFICATION AND/OR REFRESHING OF SMALL AREAS
- REDUCED HEATING TIME
- LOW MAINTENANCE
- OUTSIDE THE CYLINDER CONDENSER (NO CONTACT WITH WATER)
- IMPROVEMENT OF THE ENERGY CLASSIFICATION OF THE BUILDING
- OPERATION TIME PROGRAMMING
- EFFICIENT OPERATION EVEN WHEN THERE ARE LOW TEMPERATURES OUTDOORS

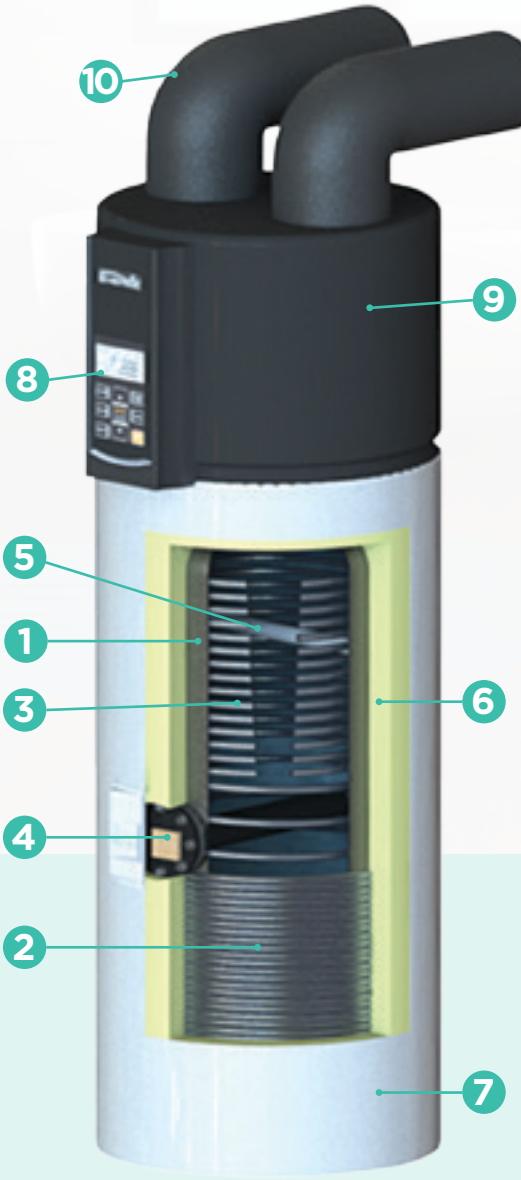
COP 3

MAXIMUM EFFICIENCY

According to EN16147
A15/W10-W55

ENERGIE THERMODYNAMIC SOLAR ENERGY

1. DHW Cylinder
2. Condenser (Coil)
3. Optional Supplementary Coil
4. Ceramic resistance + Thermostat + Sensor
5. Magnesium Anode
6. High Density Insulation
7. Outside Coating
8. Electronic Controller
9. Heat Pump Unit
10. Ducts not Included



Enamelled Steel or Stainless Steel Thermal Storage with or without Supplementary Coil

INTEGRATED SOLUTION

Heat Pump
Linked to the cylinder
High productivity
Reduced noise
High performance
Possibility of using it for dehumidification and cooling of spaces

Condenser
High thermal conductibility outside the cylinder (no contact with water)
High contact area with the cylinder (favouring thermal transfer)

Electronic Controller
Simple
Intuitive
Electronic Controller
High resolution LCD screen
Total control of the equipment

Characteristics
Adjustable support legs
Outside plate in aluminium
Electrical support to meet the need for bigger consumption
Protection anode against corrosion
Safety thermostat

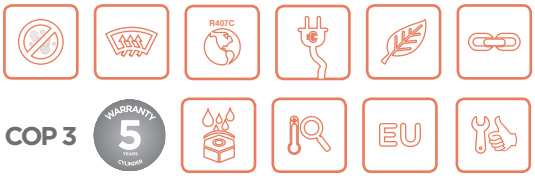
Insulation
High density
Polyurethane
High thermal resistance
High mechanical resistance

Cylinder
Stainless Steel or Enamelled Cylinder
High resistance to corrosion
Mechanical robustness
Hydraulic connections with high dimensional precision

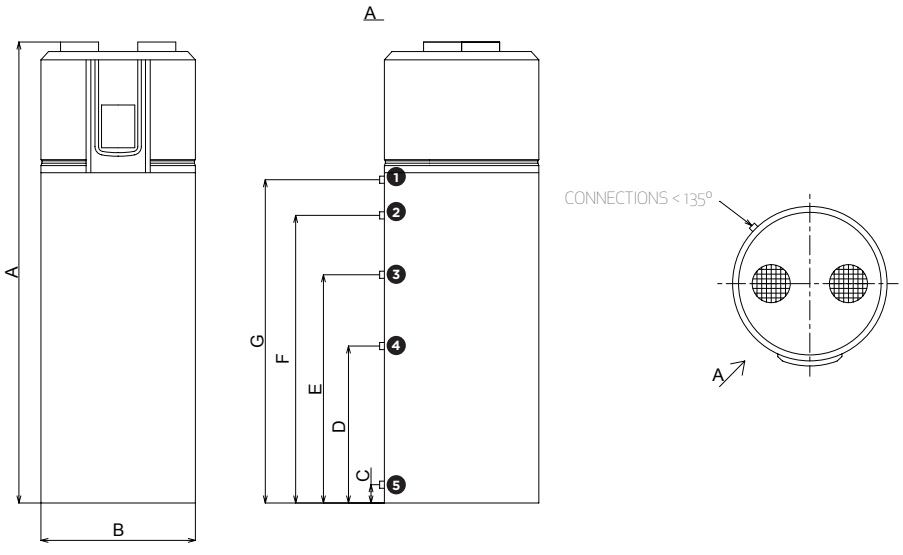
Monobloc Heat Pump
standard version

Specifications		Aquapura Monobloc 300i / 300esm
Nominal Capacity	l	295
Thermal Power	W	3000
Power Consumption (Med/Max)	W	830
Maximum Temperature	ºC	70
Max. Amount of water at 40ºC in a run	l	370/403
Maximum Operation Pressure	bar	6
Sound Power Level	dB	48
Electrical back-up power	W	3000
Gross Weight of Unit (Stainless/Enamelled)	Kg	124/145
Electrical Supply	V/Hz	230/50

EFFICIENT LOW-COST SOLUTION
EASY INSTALL



Technical drawing



Dimensions	Aquapura Monobloc 300i / 300esm
A	1915
B	650
C	77
D	757
E	1071
F	1157
G	1300

1 (Hot water)	1" Male
2 (PT valve)	1/2" Female
3 (Anode)	1 1/4" Female
4 (Recirculation)	3/4" Male
5 (Cold water)	3/4" Male
6 (Coil Inlet)	-
7 (Coil Outlet)	-

Ducts not included – Includes filter where air enters the unit
With dielectric threads for water connections

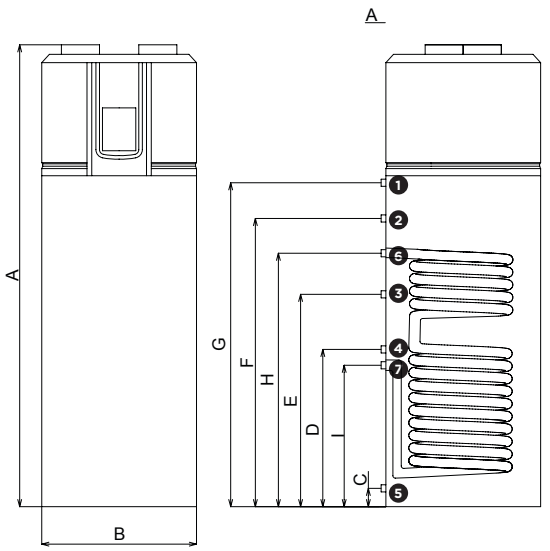
Monobloc Heat Pump
with Supplementary Coil

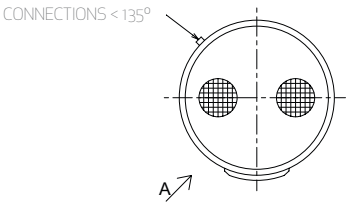
Specifications		Aquapura Monobloc 300ix / 300esmx
Nominal Capacity	l	295
Thermal Power	W	3000
Power Consumption	W	830
Maximum Temperature	°C	70
Max. Amount of water at 40°C in a run (St./En.)	l	365/398
Maximum Operation Pressure	bar	6
Sound Power Level	dB	48
Electrical back-up power	W	3000
Gross Weight of Unit (St./En.)	Kg	131/157
Electrical Supply	V/Hz	230/50

EFFICIENT LOW-COST SOLUTION ALLOWS THE CONNECTION OF ANOTHER HEAT SOURCE

COP 3

Technical drawing





Dimensions	Aquapura Monobloc 300ix /300esmx
A	1915
B	650
C	77
D	757
E	1071
F	1157
G	1300
H	-
I	-

1 (Hot water)	1" Male
2 (PT valve)	1/2" Female
3 (Anode)	1 1/4" Female
4 (Recirculation)	3/4" Male
5 (Cold water)	1" Male
6 (Coil Inlet)	1" Male
7 (Coil Outlet)	1" Male

Ducts not included – Includes filter where air enters the unit
With dielectric threads for water connections

ENERGIE®

THERMODYNAMIC SOLAR ENERGY

ENERGIE®
THERMODYNAMIC SOLAR ENERGY

ENERGIE®
THERMODYNAMIC SOLAR ENERGY

ENERGIE®
THERMODYNAMIC SOLAR ENERGY

Iris Hellas
Technology Innovations

Address Zona Industrial de Laúndos, Lote 48
4570-311 Laúndos - Póvoa de Varzim PORTUGAL
GPS Coordinates N 41 27.215' , W 8 43.669'
Telephone + 351 252 600 230
Fax + 351 252 600 239
E-mail geral@energie.pt
Website www.energie.pt

RoVo /2013 / 07

Project co-funded by:

ON.2 O NOVO NORTE
PROGRAMA OPERACIONAL REGIONAL DO NORTE

QREN QUADRO DE REFERÊNCIA ESTRATÉGICO NACIONAL
PORTUGAL 2007.2013

UNIÃO EUROPEIA
Fundo Europeu de Desenvolvimento Regional