



DEMOKRITOS
NATIONAL CENTER FOR SCIENTIFIC RESEARCH

**YOUR EXPERT ON SOLAR WATER
HEATING**





Make The Sun Work For You



OUR PHILOSOPHY

We believe that relentlessly focusing on the satisfaction of our customers we will stand out as leading supplier of high-quality Solar Heating Systems.

At Gauzer, we cultivate long-term relationships with our partners since our advance is tightly tied with their prosperity. We have a long history of committing to quality and we are holding some of the strictest international certificates, the CE, TUV & Solar Key Mark.

- **Solar water heating systems type: TERMOMAX**



The last 42 years GAUZER offers to the global market the most powerful and durable Solar Thermal Systems. Versatile Solar systems designed to cover the needs of every application. The exceptional performance of our closed systems derives from our unique characteristics which are:

a) Water tank

- ✓ Steel made inner water tank with enamel protection.
- ✓ Absolute corrosion protection and assured hygiene with direct Enameling (10% titanium) according to DIN 4753 (Baked at 850 C°) and magnesium bar cathode protection.
- ✓ Double Jacket heat exchanger for protection against frozen and overheating.
- ✓ Thick insulation 10 cm of the tank with expanded Polyurethane for minimum heat losses
- ✓ Outer cover of galvanize steel in grey color with special high resistance in different colors lateral caps.
- ✓ Certificate by ISO 9001:2008 Certificate number :10-Q-30030-TIC

b) Solar Collectors.

- ✓ Advanced technology of copper on titanium on strip plate absorbers
- ✓ Special insulation at the back 5cm
- ✓ Low-Iron tempered, high resistance solar glass
- ✓ High durability aluminum frame.
- ✓ Solar Key mark certified Ref number : SKM 9904/1



c) Solar Collectors mounting supports

GAUZER supports are made of galvanized steel angle 2.8 mm thick. They can be installed on a flat roof, on a tile roof or on a corrugated metal roof, depending on the needs of the user.



The supports ensures resistance installation of its thermo-siphon water heaters for a maximum wind speed of 55 m/s according to the standards EN 1991-1-4

d) **Our certifications**



The Solar Keymark
CEN Keymark Scheme



- **Solar water heating systems type: CITARO**



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a) Water tank

- ✓ Steel made inner water tank with enamel protection
- ✓ Absolute corrosion protection and assured hygiene with direct Enameling (10% titanium) according to DIN 4753 (Baked at 850 C°) and magnesium bar cathode protection.
- ✓ Double Jacket heat exchanger for protection against frozen and overheating.
- ✓ Thick insulation 10 cm of the tank with expanded Polyurethane for minimum heat losses
- ✓ Outer cover of steel (stainless or colored) with special high resistance in different colors lateral caps.
- ✓ Certificate by ISO 9001:2008 Certificate number :10-Q-30030-TIC

b) Solar Collectors.

- ✓ Advanced technology of copper on full plate absorbers exploiting the maximum amount of solar energy provided.
- ✓ Special insulation at the back 5cm and 2.5 cm sides with thick environmental friendly Rockwood.
- ✓ Low-Iron tempered, high resistance solar glass
- ✓ High durability anodized aluminum frame on black.
- ✓ Solar Key mark certified Ref number: SKM 9904/1



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- **Solar collectors – OPTIMA & OPTIMA COPPER**

Our optima collectors are our basic and most economical model. They came in two versions, Optima and Optima copper.

Optima has a black panel absorber of the “sandwich” type. It consists of two parallel steel sheets that are pressed into a cellular pattern that allows the maximum amount of water to flow seamlessly between them. It offers 97% efficiency and has a 0.95 thermal transmission coefficient.

Optima copper has a selective absorber that consists of a blue aluminum & titanium absorbing plate that is attached by laser on water carrying copper tubes. The absorber has 97% efficiency and a thermal emission coefficient of 0.93.

Both absorber types are cased within a seamless aluminum frame that has a galvanized steel back and is insulated with 6cm of Rockwool.

The collectors' crystal is reinforced extra clear mistlite glass that allows the maximum amount of light to pass to the absorber while great durability against various weather elements.

- **Solar collectors – DIONISSOS**

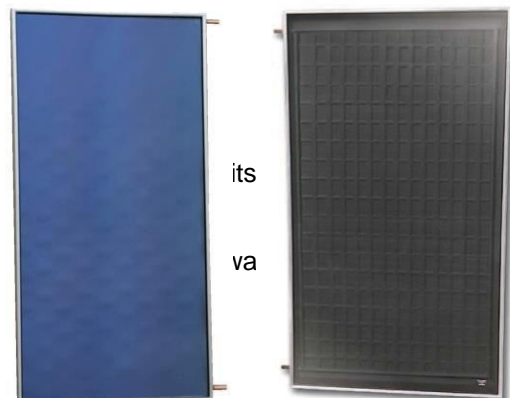
Dionissos collector is our “flagship” collector model. With its highly selective har Dionissos is durable and highly efficient collector suitable for all solar hot water a

Dionissos' absorber a special blue aluminum & titanium absorbing plate that is a tubes. The absorber has 95% efficiency and a thermal emission coefficient of 0.

The absorber is cased within a seamless frame made from black anodized alu made either from aluminum or galvanized steel and is insulated with 6cm of R has also lateral insulation of 2,5cm Glasswool at each side.

The collectors' crystal is reinforced extra clear mistlite glass that allows the maximum amount of light to pass to the absorber and has great durability against various weather elements. Our Dionissos collector is suitable for every kind of solar hot water application. From small domestic passive solar systems to big industrial installations, Dionissos is the collector to use.

We also provide a special Dionissos model for use with drain-back systems.





Installation photos

- **Solar collectors – LIVVA**

The family "LIVVA" collector with one piece external seamless trough and copper water frame is the ideal choice that combines reliability with efficiency. The selective absorber - made of selective aluminium sheet with a special titan coating formed in vacuum - achieves high levels of absorbency 95% ($\pm 2\%$) and at the same time low radiation 5% ($\pm 2\%$) making LIVVA collector a prime choice.



LIVVA Price list



• **Drain back forced solar system – INTEGRA 200 LT**

Drain back systems are closed-loop, indirect, active systems. A heat-transfer fluid (SOL – HTF and water 60/40%) contained in an unpressurized, closed loop is pumped through the collectors and is separate from the end-use water being heated through a heat exchanger.

When the pump is off, the transfer fluid drains out of the properly sloped collectors and pipe, leaving them empty and protected from freezing and the water tank from the overheating.

➤ Advantages

- ✓ Having an unpressurized transfer fluid loop means that numerous components required in pressurized systems are not needed.
- ✓ An expansion tank, check valve, pressure gauge, and an air vent are not required, though a pressure-relief valve may still be installed. Though any equipment cost savings, might be negated by the expense of the drain back reservoir, installation costs is lower because the installation is simplified.
- ✓ The system is not damaged if the pump fails to run (no electric power) and the system cannot reverse thermosiphonic at night.
- ✓ There are far less moving components to fail (e.g. Check- valves, air vents and expansion tanks) which dramatically reduces the need and costs of maintenance.

➤ Efficiency

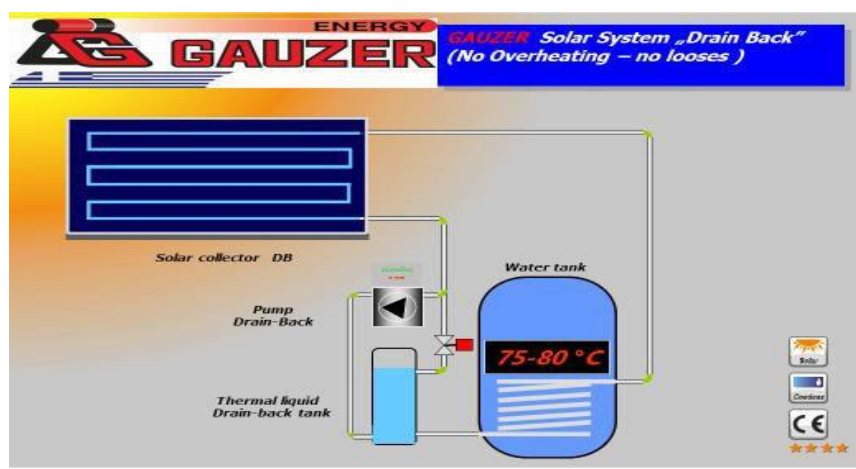
- ✓ The system is equipped with a high tech variable- speed “smart” solar pump that can reduce pumping energy use by over 75%
- ✓ Optimize the thermal liquid flow through the sun collectors and water tank (heat exchanger) increase the heat-transfer performance 20% and reduce the thermal losses
- ✓ The controller flow down and allow more KWs of energy to get off.



The Integra consists of:

- Tank 200liters with two heat exchangers (Sun - heating) and electrical resistance 4 kw
- Automated operation and monitoring (differential thermostat)
- Modulate solar Pump (special for Drain back systems) GRUNDFOS
- 2 Solar panels Drain Back 2m² each and 4m² in total. Collector Type: Dionissos
- Mounting bases for the collectors

Price per unit
(200lt model):
1.490€



Operating Principle of the Drain Back solar systems

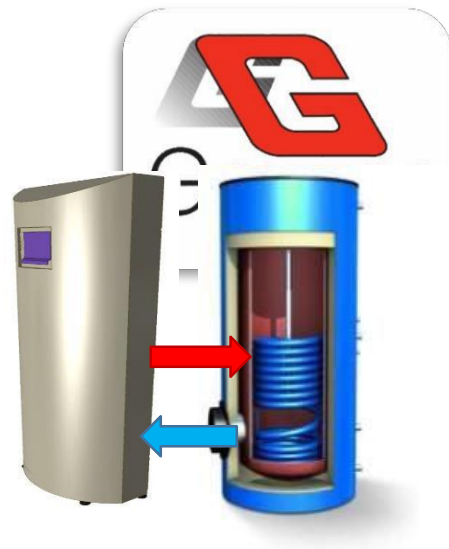
- **MEGA-INTEGRA - Drain back forced solar system**
300lt,400lt,800lt,1000lt,1500lt.

Mega-Integra is our solution for bigger drain back systems.

The Mega-Integra is the kit that contains all the necessary parts of a drain back solar system except from the water tank. This way we can adjust our superior technology to serve all kinds of needs

From 300lt systems to 1.500lt we can offer sophisticated drain back systems with the use our Mega-Integra kit. It is the perfect solution for small businesses that operate under extreme weather conditions but have constant need for a hot water source.

With the Mega-Integra you are able to harvest the energy of the sun without the fear of the solar system pipes freezing or overheating.



- **Active Solar Systems (forces circulation)**

Active solar systems are those which collect solar radiation and convert it in hot water. GAUZER solar systems consists of the sun collectors, the water enamel protection tanks, the thermostats differential, and the solar station.

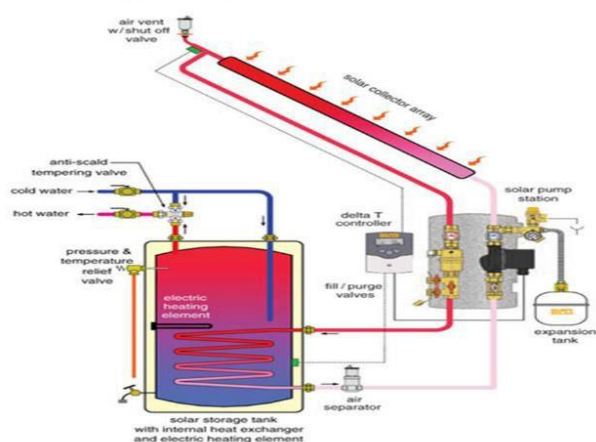
Each systems consist of the next components:

- The solar collectors, the water tank, the thermostat differential, the solar station, expansion tank.
- The water tank can be equipment with one, two, or three heat exchangers.

Available capacity: From 200lt up to 10.000lt

These systems are usually made to order and are priced per order as well. Please contact us and we will determine how to cover your need at the best possible price.

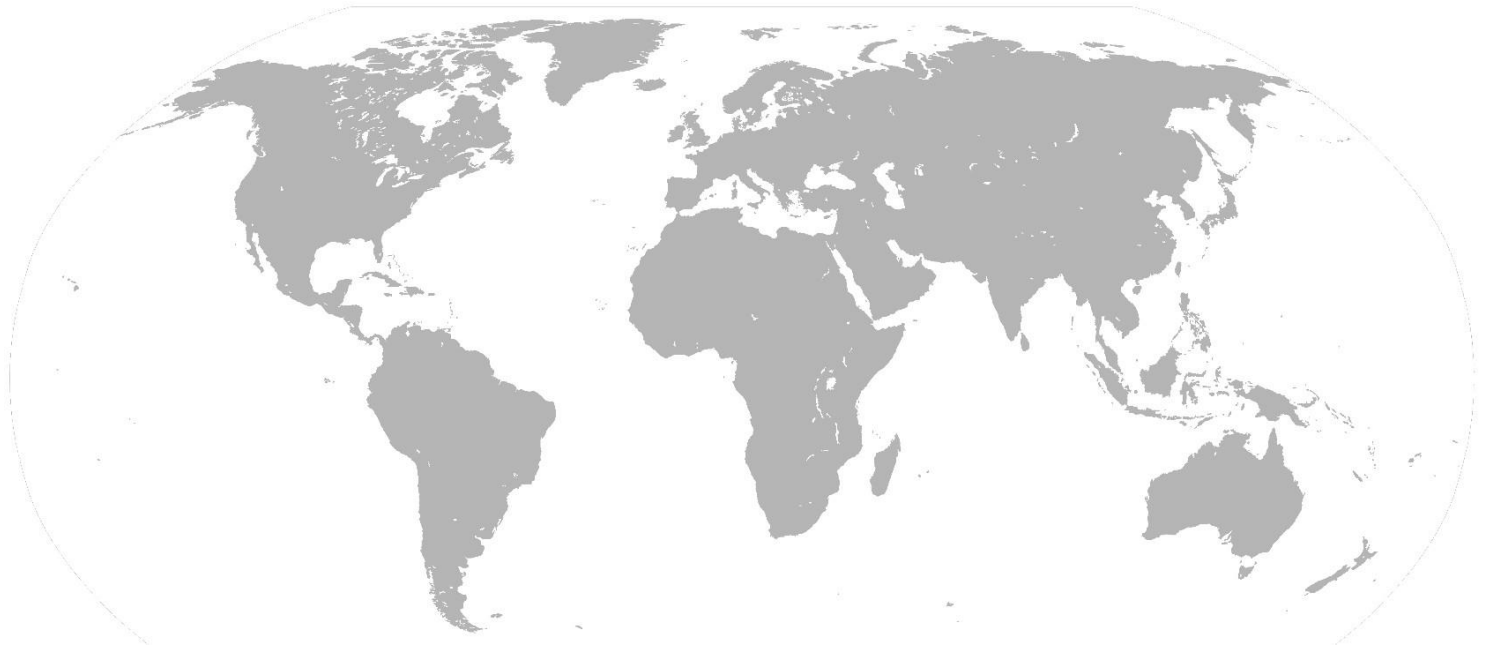
Single tank system with electric backup



Reference photos

Below you can find some indicative prices:

GAUZER PRESENCE



We have our base in Greece and our international presence spans across Central & Eastern Europe, the Middle East and Asia.

Thank you for your time .