Solarico®

INNOVATIVE
PLASTIC COMPOSITE
NEW GENERATION

HYGIENIC WATER HEATER
DRAINBACK SOLAR STORAGE TANK
STRATIFIED SEPARATOR ACCUMULATOR

GENERAL BENEFITS

- HEAT PUMP READY
- SUPPORT HEATING WITH SOLAR
- HEART OF THE SYSTEM

Thermal Tank UniQube

Hot water storage tank

10 YEARS · TÜV · ISO 9001 · CE · 30 YEARS

solarico.eu

Solutions Beyond the Sun
...by Solarico

Connection between us and water, in our homes, corresponds to the modality of living. Solarico Thermal Tank UniQube leads us to new generations of storage tanks, a long life way of keeping our water hygienic and high quality.

Solarico thermal storage systems can store solar energy in the form of heat by using water as material with high specific heat capacity. Water stores heat and transfers energy in our home.

We store it, you use it!

Solarico Production

Leading The Modern Era

A-class energy efficiency

Decades of warranty and reliability

High efficiency thermal device

Minimum heat loss, impressive strength and light weight. Solarico's Thermal Tank UniQube storage tank is rotomolded plastic tank, strengthened by filament winding of fiberglass.

Unique combination of these materials results in low weight tank. Special plastic, stainless steel stratification tube and stainless steel heat exchangers ensure corrosion resistance and anode free tank, which means no smelly water inside, no unwanted chemical reactions too.

Almost all materials in Solarico's Thermal Tank UniQube are low heat loss materials. We insulate it with very limited fire contribution polyurethane foam class B2 according to DIN 4102, so the storage tank ensures safety, highest class of insulation, high effectiveness and system stability.

Ongoing improvement

Overcoming conventional energy storage

Looking to the future, combining knowledge and experience, we got inspired to start our own production line of the advanced heat storage tank - the Thermal Tank UniQube.

Lifting to the highest level of energy efficiency, and seting a new standards for heat storage tanks.

Shaking the stagnant tech - composites instead of steel

Lightweight, safe, durable

It starts with computer controlled automated process of rotational molding the cylindric inner tank, using the cross-linkable PEX plastic

- It's impermeable and thermally inert material
- Temperature resistant, with outstanding compressive and tensile properties

Then we wind it with glass-fiber composite in order to achieve a top strength, so it becomes a tank - stable to higher working pressures.

The combination of these materials is resistant to harshest environment and corrosion on both sides of the tank.

“A” class of energy efficiency

Composite-plastic materials are significantly reducing heat loss, so Thermal Tank UniQube is normal size storage tank with up to 60% lower heat loss than conventional hot water storage tanks.

No corrosion

Combination of plastic and fiberglass composite materials is corrosion resistant on both sides of the tank.

Pressure stability

Due to its excellent strength, no welding joints, and no weak points, Thermal Tank UniQube can be comfortably operated at a constant pressure up to 6 bars and a temperature up to 95 degrees Celsius. It is pressure tank for direct integration into the heating systems.

Optimized stratification and controlled diffusion

Stainless steel stratification tube inside, keeps the thermal diffusion controlled, and stratifies the heat into thermal layers, improving the efficiency and lowering the heat loss.

Adjustable for multiple operations and various kinds of systems

Solarico’s Storage Tank Thermal Tank UniQube is designed to work as stand-alone storage tank or in combination with other devices of any type of thermal system. Works perfect as a buffer, solar or combined storage tank, for heating domestic water. Solarico Thermal Tank UniQube can be integrated directly into the heating systems with maximum continuous operating pressure of six bar.

Solar thermal collectors connected to Thermal Tank UniQubes perform a support for the heating system.

Equipment

Thermal Tank UniQube can be equipped with stratification tube, heat exchangers, electric heater backup, and combinations of it.

Thermal Tank UniQube have maximum extended durability, all inner parts are removable, replaceable, and spare parts can be used.

Thermal Tank UniQube can be upgraded from one type of device to another.

Minimum maintenance

Due to its non-corrosive tank, there are no anode rods to be periodically replaced. Stainless steel heat exchanger have a mirror surface finish, it is made of stainless steel corrugated pipe and the inside flowing water is followed by vibrations and swirling, so there are no conditions for deposits such as lime scale, sediment or rust. The functional safety of the safety valve must be verified periodically.

Space saving attractive design

Cuboid shape and design saves your space and fits in your interior design.

Performance as our voice

Up to 50% energy savings

When using solar thermal panels, storage tank is the central part of any heating system, guaranteeing its efficiency. Thermal Tank UniQube has improved energy efficiency class “A”, usable hot and clean water, light-weight, corrosion resistant, space saving design. The plastic tank is reinforced by filament winding of fiber glass. Using this technology for our storage tank, we lift it a level above the conventional storage tanks.

Thermal Tank UniQube provides hygienically safe water heated by any kind of heat source, or combination of more heat sources, depending on customer needs. The
inside heat diffusion is limited by stainless steel tube difusion protection. Using the same technology, Solarico is also producing a new generation of composite expansion vessels, pressure and water treatment tanks, and heat exchangers for pool heating.

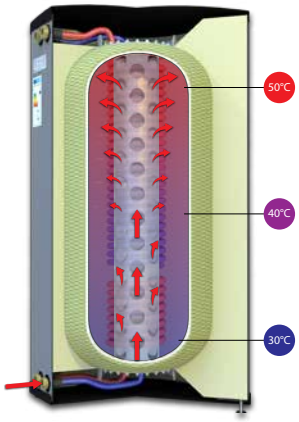
Hygienic hot water

The Solarico Thermal Tank UniQubes consumes energy for hot water only at the moment when the user request it. It saves 10% ÷ 30% compared to conventional water heaters. Cold drinking water is connected to the inlet of stainless steel heat exchanger, and its outlet is connected to the tap. Water flows thru when the tap is open and gets instantly the heat from the water of the heating system that is stored in the tank.

This ondemand heating is also limiting proliferation of Legionella.

Thermal Stratification

Thermally layered hot water tanks are saving up to 25% of energy, compared to difussed heated tanks. The hottest water takes the top layer and is first used. Therefore the time between heat input and heat output is low, minimizing the standing heat losses. It also improves the time of heat delivery from the heat source to the heat consumers, providing best compofrt for the final users.



Buffer – Heat accumulator

It stores the surplus of heat coming out of sun, absorbs all the peaks of heat sources. It is also storing the heat produced during the cheap electricity rate and use it during the expencive rate. It scores 10% ÷ 30% energy savings.

“Drain Back” Solar Heating

We input a free solar energy into the heating system. The more sun heat we store, the bigger energy savings, and the lower payback time of the investment.

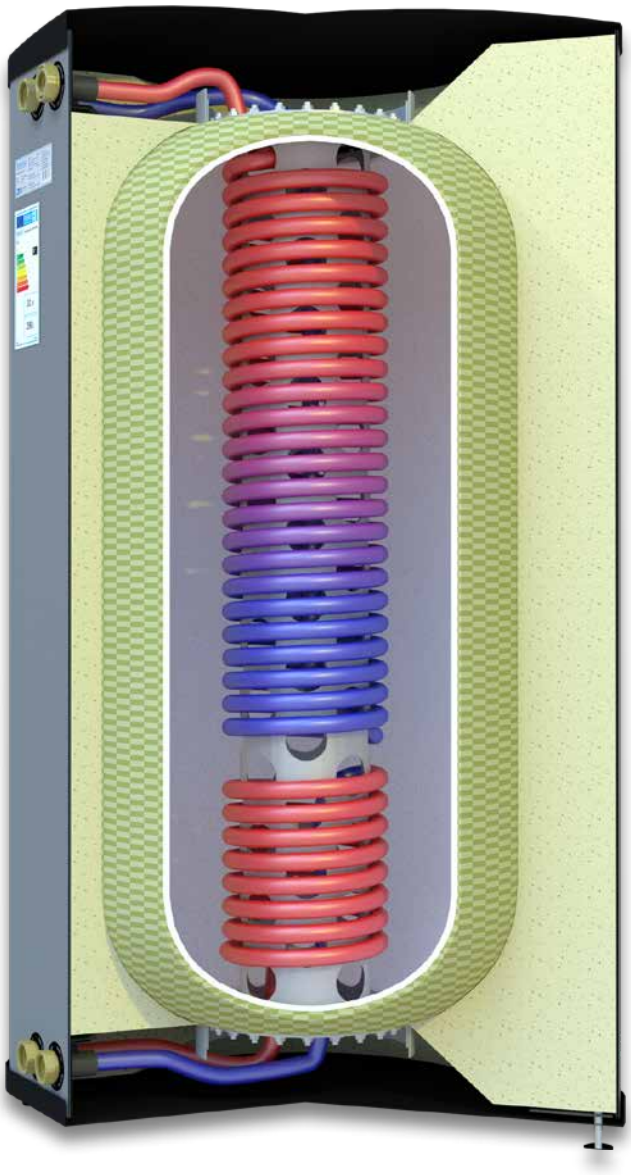
Combining UniPlate collectors and Thermal Tank UniQube hot water storage tanks it is possible to input from 7kW$_{th}$ ÷ 20kW$_{th}$ sun heat into the heating system, using only one Thermal Tank UniQube.

Solarico®

Thermal Tank UniQube

Hot water storage tank

- Continuous flow domestic water heater, a hygienic storage tank
- Domestic hot water heat exchanger made of stainless steel inox 316 l corrugated pipe
- Solar heat exchanger made of stainless steel inox 316 l corrugated pipe
- Device for stratification of the heat
- Hydraulic separator between the heat source circuit and the heating circuit
- Equipped with four sleeves for sensors
- Polyurethane high quality insulation, specific in very limited fire contribution, class b2 according to din 4102
- All flanges are replaceable and it can be modified to any other type of storage tank if necessary
- Electric heater backup (optional)



TÜV HESSEN · ISO 9001 LL-C (Certification) · QUALITY 30 YEARS GUARANTEE · QUALITY 10 YEARS GUARANTEE

ENERGY SAVING
WITH SOLARICO PRODUCTS

SQ-BPSW
Combined storage tank

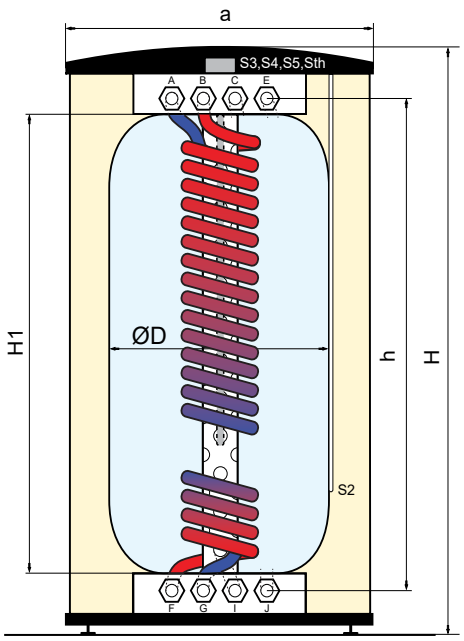
SQ-BPW
Domestic water heater

SQ-BPS
Solar storage tank

SQ-BP
Stratification storage tank

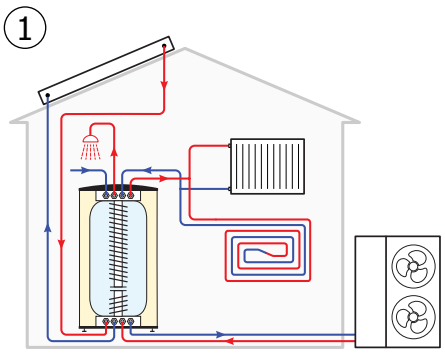
SQ-B
Buffer storage tank

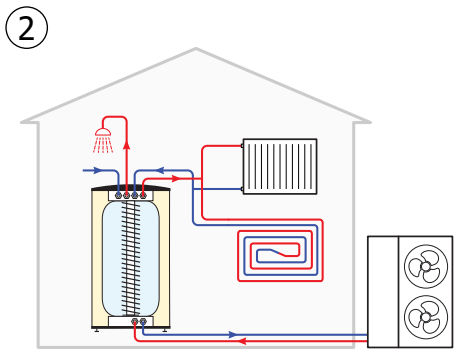
Thermal Tank UniQube			310	440	800
D (diameter)		(mm)	620	620	890
H1 (height)		(mm)	1300	1730	1730
h (connectors)		(mm)	1320	1750	1750
H (height)		(mm)	1570	2000	2000
a (width)		(mm)	725	725	960
Pivot measurement		(mm)	1730	2130	2219
Net tank capacity		(l)	290	413	773
Approx. weight		(kg)	104	130	160
Connections C,E,I,J				5/4"	
Max. working temp.		(°C)	90	90	90
Max. working pressure		(bar)	6	6	6
Max. test pressure		(bar)	9	9	9
S2 Solar sensor position		(mm)	1110	1550	1550
S3 DHW sensor position		(mm)	600	900	900
S4 Heating sensor position		(mm)	140	140	140
S5 Overheating protection		(mm)	140	140	140
Nominal flow rate (all exchangers)		(l/min)		20	
Max. flow rate (all exchangers)		(l/min)		30	
Max. working pressure (all exchangers)		(bar)		10	
Max. test pressure (all exchangers)		(bar)		15	
Solar heat exchanger					
Connections F, G				5/4"	
Capacity		(l)	2,85	4,12	4,12
Output area		(m²)	1,05	1,43	1,43
DHW heat exchanger					
Connections A, B				5/4"	
Capacity	SQ-BPSW	(l)	16,15	21,86	21,86
	SQ-BPW		17,42	25,66	25,66
Output area	SQ-BPSW	(m²)	5,06	6,78	6,78
	SQ-BPW		5,44	7,93	7,93

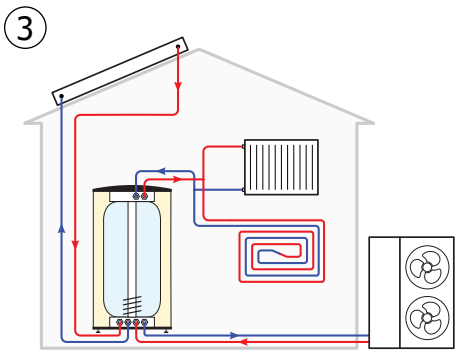


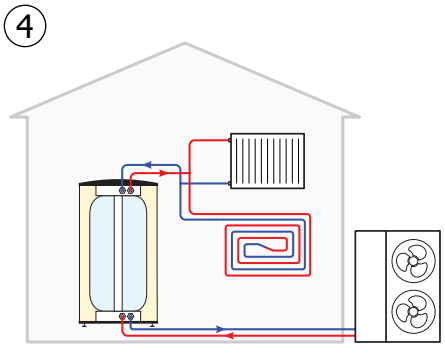
A - DHW in
B - DHW out
C - Heat consumer in
E - Heat consumer out
F - Solar in
G - Solar out
I - Heat source in
J - Heat source out

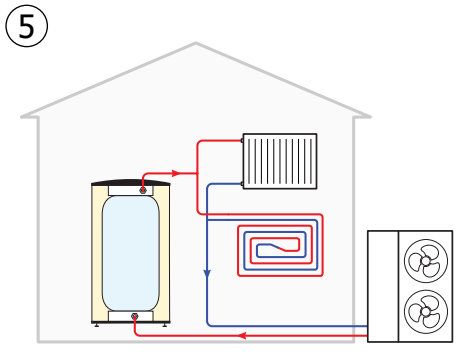
S2 - Solar sensor
S3 - DHW sensor
S4 - Heating sensor
S5 - Overheating protection
Sth - Electrical thermostat











1. SQ-BPSW - Combined storage tank
2. SQ-BPW - Domestic water heater
3. SQ-BPS - Solar storage tank
4. SQ-BP - Stratified separator storage tank
5. SQ-B - Buffer storage tank

* The heat pump and the heating elements are used for illustrative purposes only. In reality any type of heat source and any type of heat consumer can be used

Solarico®

INNOVATIVE
PLASTIC COMPOSITE
NEW GENERATION

HYGIENIC WATER HEATER
DRAINBACK SOLAR STORAGE TANK
STRATIFIED SEPARATOR ACCUMULATOR

ENERGY SAVING
WITH SOLARICO PRODUCTS

- Solar Thermal Collectors
- Multi-Functional Storage Tanks and Hygienic Water Heaters
- Drain Back Reservoirs
- Expansions Vessels
- Pressure Vessels
- Heat Exchangers

PRODUCTION FACILITY:

Euroterm d.o.o.
Lece Koteski 50
Industrial area Biljana
7500 Prilep
R. North Macedonia

info@solarico.eu
www.solarico.eu
+389 75 463 929
+389 48 419 415
+389 48 422 981