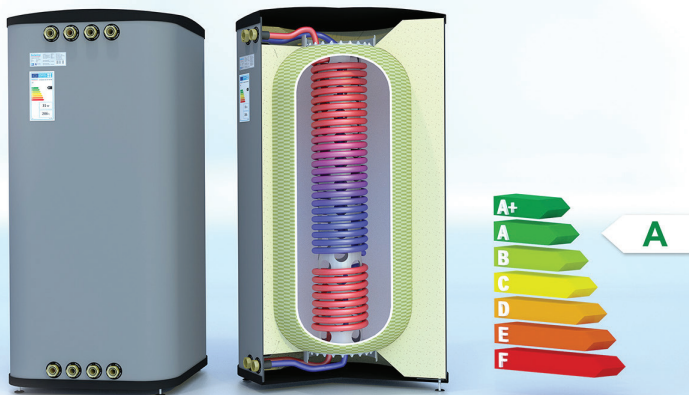


## UniQube

Thermal Plastic - Composite  
Water Heaters & Storage Tanks



**ISO 9001**  
LL-C (Certification)

## Installation and Operation Manual

- |   |  |
|---|--|
| <input type="checkbox"/> Drain Back Tank SQ-BPSWEH DB                                 | <input type="checkbox"/> Domestic Water Heater SQ-BPW                                |
| <input type="checkbox"/> Combined Storage Tank SQ-BPSW-6C                             | <input type="checkbox"/> Domestic Water Heater SQ-BPWEH with electric heater back up |
| <input type="checkbox"/> Combined Storage Tank SQ-BPSW                                | <input type="checkbox"/> Solar Storage Tank SQ-BPS                                   |
| <input type="checkbox"/> Combined Storage Tank SQ-BPSWEH with electric heater back up | <input type="checkbox"/> Separator Storage Tank SQ-BP                                |
| <input type="checkbox"/> Domestic Water Heater SQ-BPW HP-Ready                        | <input type="checkbox"/> Buffer Storage Tank SQ-B                                    |

# CONTENTS

Introduction.....3

General Informations.....4-8

Installation and assembly.....9-13

Drawings and dimensions..... 14-29

Accessories .....30-31

Warranty .....32-34

## Important

Dear customer,

We strongly believe that the products bought from us will contribute the comfort at your homes and increase its energy efficiency.

**Read and understand the Installation and Operating Guide carefully before attempting installation, start-up, operation, or service. Installation and service must be performed only by an experienced, skilled installer or service agency.**

This booklet contains important information about correct installing and operating of this storage tank.

It is integral part of this product, store it close to the device, and keep it available for the reference for its service life.

Please contact the manufacturer's customer service department or the local representative of the manufacturer with any questions or other issues.

## Safety Related Symbols

Safety-related information and instructions have been provided in this guide and on the UniQube storage tank to warn any person(s) of potential hazards.



This is safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



### **Danger**

Indicates an imminent hazardous situation which, if not avoided, could result in injury or death.



### **Warning**

Indicates a potential hazardous situation which, if not avoided, could result in injury or death.



### **Caution**

Indicates an imminent hazardous situation which, if not avoided, may result in minor or moderate injury.



### **Note**

Important information

All safety messages will refer to a potential hazard. Follow the instructions in this manual exactly to avoid the risk of injury.

# GENERAL INFORMATION

## Models and Usage

UniQube storage tanks are available as:

- Drain Back Tank SQ-BPSWEH DB
- Combined Storage Tank SQ-BPSW-6C
- Combined Storage Tank SQ-BPSW
- Combined Storage Tank SQ-BPSWEH with electric heater back up
- Domestic Water Heater SQ-BPW HP-Ready
- Domestic Water Heater SQ-BPW
- Domestic Water Heater SQ-BPWEH with electric heater back up
- Solar Storage Tank SQ-BPS
- Separator Storage Tank SQ-BP
- Buffer Storage Tank SQ-B

UniQube storage tanks are intended to be used in central hot water heating systems and solar thermal systems.

UniQube storage tanks are intended to be permanently connected to the water mains

Each model must be installed and used the way this booklet describe, and in accordance with the conditions detailed on the rating plate.



**NOTE:** The equipment shall be installed in accordance with those installation regulations required in the area where the installation is to be made. These regulations shall be carefully followed in all cases. Authorities having jurisdiction shall be consulted before installations are made. All wiring on water heaters shall be in accordance with the National Electrical Code and/or local regulations.



**WARNING:** Use this storage tank only in hydronic heating systems. The installer must comply with all plumbing codes. Do not operate above the temperature or pressure specified on the rating plate. Failure to comply may result in personal injury, property damage, or death.

## Quality of the water

### Lime scale effects

Chemical imbalance of the water supply may cause decreased heating efficiency to the storage tank and associated equipment. Solarico recommends having water quality professionally analyzed to determine whether it is necessary to install a water softener. It is important that the water chemistry be checked before installing the storage tank, as water quality will affect the reliability of the system. In addition, operating temperatures above 57° C will further accelerate the build-up of lime scale and may shorten the service life of the storage tank. According to a rule of thumb a lime scale layer with a thickness of 1 mm will result in a loss in efficiency of 10%. In extreme cases lime scale layers can damage the heat exchangers.

### Corrosion effects

pH values of water above 11 may cause damage to rubber seals, and very low pH values below 6, may cause damage to stainless steel heat exchangers. Depending on the materials used in the heating system, Solarico recommends that pH value should lie between 8,2 and 10.

## Disclaimer

Solarico is not liable for damage resulting from any but the device's intended use.

Solarico is not liable in case of:

- Installing or operating the device or its components contrary to the instructions contained in this booklet.
- Unprofessional installing or operating the device or its components.
- Installing or operating the device or its components the way that is not described in this booklet, and the way which is not specifically approved by manufacturer in writing.
- Modifying, converting or removing the device or its parts when it is not approved by manufacturer in writing.

# GENERAL INFORMATION

## Safety instructions



**WARNING:** When using electrical appliances, basic safety precautions to reduce the risk of fire, electric shock, or injury to persons should be followed, including:

- This storage tank must be grounded. Connect only to properly grounded outlet.
- Install or locate this storage tank only in accordance with the provided installation instructions
- Use this storage tank only for its intended use as described in this manual.
- As with any appliance, close supervision is necessary when used by children.
- Do not operate this storage tank if it has damaged connections or plug, if it is not working properly, or if it has been damaged or dropped.
- This storage tank should be serviced only by qualified personnel. Contact nearest authorized service facility for examination, repair, or adjustment.



**NOTE:** All persons carrying out work on or with the device must have read and understood the assembly and operating instructions before starting work. The same applies where the relevant person has previous experience working on or with the same type or a similar type of device, or has received training from the manufacturer.



**DANGER:** Water temperature setting:

Safety and energy conservation are factors to be considered when selecting the water temperature setting of water heater's thermostat. Water temperatures above 51°C can cause severe burns or death from scalding. Be sure to read and follow the warnings outlined on the label pictured below.

The temperature of the water in the tank can be regulated by the digital controller, or/and electric thermostat that can be located under the top cover, hot and cold water mixing valves etc. To comply with safety regulations we recommend the buyer to set the temperature of domestic hot water at temperatures equal or lower than 51°C.

## GENERAL INFORMATION



**NOTE:** Mixing valves are available for reducing point of use water temperature by mixing hot and cold water in branch water lines. Contact a licensed plumber or the local plumbing authority for further information.



**DANGER:** Hotter water increases the potential for Hot Water SCALDS.

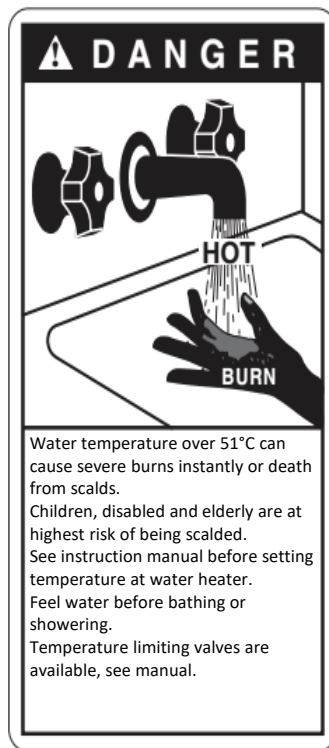


**DANGER:** Households with small children, disabled, or elderly persons may require a 49°C or lower thermostat setting to prevent contact with “HOT” water.



**DANGER:** This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.

Children should be supervised to ensure that they do not play with the appliance.



## Disposal

When decommissioning the device on site, ensure compliance with local legislation, guidelines and standards for recycling, reuse, and disposal.

# GENERAL INFORMATION

## Maintenance

The functionality of pressure safety valves, that Solarico recommends to be installed, must be periodically tested.

The water may drip from the discharge pipe of the pressure-relief device and that this pipe must be left open to the atmosphere.

The pressure-relief device is to be operated regularly to remove lime deposits and to verify that it is not blocked.

There is no need UniQube storage tanks to be maintained of corrosion, due to its corrosion resistant materials.

### Routine Preventive Maintenance

Properly maintained, your water heater will provide years of dependable trouble-free service.

Routine preventive maintenance program should be established and followed by the user. If electric heater is used, It is recommended that a periodic inspection of the operating controls, heating element and wiring should be made by service personnel qualified in electric appliance repair.

1. At least once a year, manually turn "on" the temperature pressure relief valve, located on the "Heating Out" line, to make certain the valve operates freely and allow few liters to flush through discharge line. Make certain the discharged water is directed to an open drain.



**DANGER:** Before manually operating the relief valve, make certain no one will be exposed to the danger of coming in contact with the hot water released by this valve. The water may be hot enough to create a SCALD hazard. The water released should be directed to a suitable drain to prevent injury or damage.



**NOTE:** If the temperature and pressure relief valve on the water heater discharges periodically, this may be due to thermal expansion in a "Closed" water system. Contact the water supplier or your plumbing contractor on how to correct this. DO NOT plug the relief valve outlet.

2. There is a possibility water heater's tank can act as a settling basin for solids suspended in the water of heating circuits. It is, therefore, not uncommon for hard water deposits to accumulate in the bottom of the tank. It is suggested that a few liters of water be drained from the water heater's tank every month to clean the tank of these deposits. Depending on how much deposits are there during first few months of cleaning, you can change the frequency of cleaning.

3. Rapid closing of faucets or solenoid valves in automatic water using appliances can cause a pounding "water hammer" sound. "Water hammer" can be described as a banging noise heard in a water pipe following an abrupt alteration of the flow with resulting pressure surges. Strategically located risers in the water pipe system can be used to minimize the problem. Also water hammer arresting devices are usually available from your plumber or local plumbing supply store.

If you use electric heater back up:

4. Most electrical appliances make some sound when in operation, even when new. If the hissing or singing sound level increases excessively, the electric heating element may require cleaning. Contact your installer or plumbing contractor to inspect.

5. The area near the water heater must be kept free of flammable liquids such as gasoline or paint thinners, adhesives or other combustible materials.



# INSTALLATION AND ASSEMBLY

## Instructions to installer

During installation and operation, the country specific requirements and regulations must be observed:

- Regulations and norms concerning the fitting of the installation with safety devices.
- Safety during installation - personal protective equipment.



**WARNING:** The preparation, installation and commissioning must be performed by an authorized professional installer / service.



**CAUTION:** Local construction regulations on installation of water tank must be observed; weight of the boiler must comply with the stability of the floor of the room where it will be installed.

## Requirements to storage tank installation room

Ensure sufficient space during the installation, available between the device and walls or other objects to install connection lines. This will be necessary only for the connection side of the tank. The three other sides can be placed against a wall. Locate the water heater in a clean dry area as near as practical to the area of greatest heated water demand. Place the water heater in such a manner that the electric heater and thermostat (optional) and element access panels can be removed to permit inspection and servicing such as removal of elements or checking controls. Do not install the water heater in outdoor, unprotected areas or near any other appliances where high temperatures are present, such as wood burning stoves, boilers, or furnaces. High temperatures can warp or otherwise damage the nonmetallic construction of this water heater. Make certain the floor underneath the water heater is strong enough to sufficiently support the weight of the water heater once it is filled with water.



**CAUTION:** The room must be thermal insulated in order to provide efficiency of the appliance and prevent the water from freezing.



**NOTE:** Recommended height of the ceiling of the installation room is 1200mm greater than the height of the tank. Recommended distance between the tank and the walls of the installation room is 200mm.

## Requirements to storage tank installation



**NOTE:** The length of connecting pipes between the storage tank and consumer must be as short as possible.



**NOTE:** Install the storage tank as close as possible to the heat generator to keep heat losses as low as possible. Ensure minimum pipe distances to consumers.

# INSTALLATION AND ASSEMBLY

## Shipping and packaging

We recommend delivering your storage tank directly to the installation site on the pallet and in the original packaging.

During transport and installation, depending on the weight, appropriate safety equipment must be used in accordance with Directive 2006/42/EC.

When transporting items weighing more than 30 kg, the use of pallet jack, fork truck or other hoisting devices is a must.



**NOTE:**

The storage tank is delivered with fully installed insulation.  
Ensure proper and eco-friendly disposal of all packaging and transport material.



**DANGER:** Storage tank can accidentally move during transport.



**DANGER:** Increased danger of tipping while lifting the storage tank off the wooden pallet and during transport on a pallet truck or handcart! Injury and material damage hazard. Ensure appropriate safety measures to prevent tipping.

# INSTALLATION AND ASSEMBLY

## Assembly



**NOTE:** Compliance with local accident prevention guidelines, legal requirements, directives and guidelines is mandatory.



**WARNING:** The preparation, installation and commissioning must be performed by an authorized professional installer / service.



**NOTE:** It is our recommendation an expansion vessel to be installed on the domestic cold water supply line, between the tank connector "A" and pressure relief valve, so it will absorb pressure fluctuations, water shocks in the cold water supply system, and to prevent unnecessary water loss.

Expansion vessels are mandatory to be installed for heating circuit and solar thermal circuit.



**WARNING:**

Do not exceed the working pressure of 6 bar and temperature of 95 degrees Celsius for buffer tank, and 10 bar for stainless steel heat exchanger coils (domestic hot water line and solar in/out line).

Installation of a pressure relief valves and venting valves is mandatory for each hydraulic circuit:

- Domestic Hot Water circuit between connector "A" and connector "B"
- Heating among connectors "C", "E", "I", "J", and
- Solar thermal circuit between connectors "F" and "G".

We recommend pressure reducer to be installed on each filling line.

A discharge pipe connected to the pressure-relief device is to be installed in a continuously downward direction and in a frost-free environment.



**NOTE:** Seal unused connection points with a matching plug.



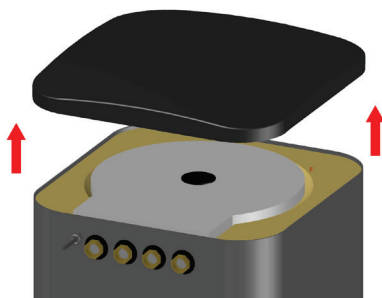
**CAUTION:** The storage tank must be integrated into the system in accordance with the connection instructions provided.

# INSTALLATION AND ASSEMBLY

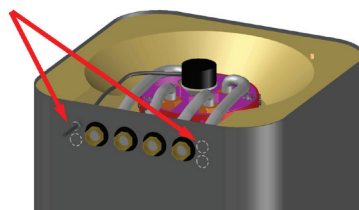
## Sensors assembly and wiring

Sensors for automation of the heating system are not part of Solarico storage tanks. Depending on the type, Solarico storage tanks are provided by maximum 4 sensor sleeves. All sensors can be installed from the top side of the tank, under the outer top cover.

1. Take off the upper cover parallel to the tank, holding it on the opposite sides.



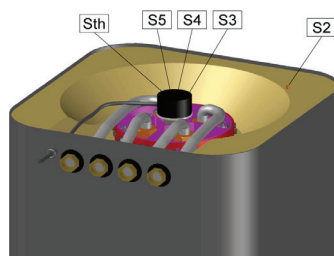
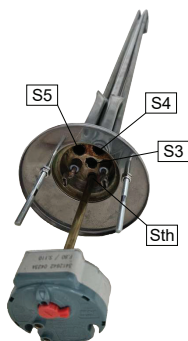
2. Choose and open the grooved caps behind the insulation jacket, near the upper front pipe connectors. Insert all the cables using cable inlets (cables for sensors, electric heaters and for electric mechanical thermostat)



3. Insert the sensors in the appropriate and marked sensor sleeves on the top of the tank, under the upper cover

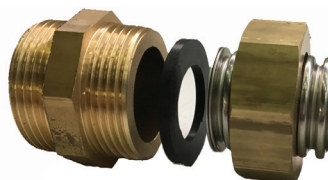
S2 Solar temperature sensor  
S3 DHW temperature sensor  
S4 Heating temperature sensor  
S5 Overheat protection  
Sth Thermostat temperature sensor

Models without electric heating element have S2, S3, S4 and S5 sensor pipes.



## Accessories

Connecting seals are part of this storage tank. Use only **THICK-WALL MALE NIPPLES** to connect the tank pipes.



# INSTALLATION AND ASSEMBLY

The following table shows the sensor positions.

SQ 440/800	Position	B	BP	BPS	BPW	BPSW
S2 Solar sensor	from above			1550 mm		1550 mm
S3 DHW sensor	from above				900 mm	900 mm
S4 Heating sensor	from above	140 mm	140 mm	140 mm	140 mm	140 mm
S5 Overheating protection	from above	140 mm	140 mm	140 mm	140 mm	140 mm
Sth Electrical thermostat	from above	450 mm	450 mm	450 mm	450 mm	450 mm

SQ 310	Position	B	BP	BPS	BPW	BPSW
S2 Solar sensor	from above			1110 mm		1110 mm
S3 DHW sensor	from above				900 mm	900 mm
S4 Heating sensor	from above	140 mm	140 mm	140 mm	140 mm	140 mm
S5 Overheating protection	from above	140 mm	140 mm	140 mm	140 mm	140 mm
Sth Electrical thermostat	from above	450 mm	450 mm	450 mm	450 mm	450 mm

## Venting Valve

UniQube storage tanks do not have special outlet connector for venting valve, so this valve must be installed at the connection pipe that is the highest point of the tank.  
It is the connector E.

## First Filling of the storage tank

UniQube must be filled on the heating side.  
It is recommended a safety valve to be installed and to be checked its functionality.  
Cracking noise is normal during the first time filling.

## Emptying of the storage tank

Room where is installed UniQube storage tank must have water draining system.  
It is recommended to be installed a drain valve, externally at connector J.

## Insulating

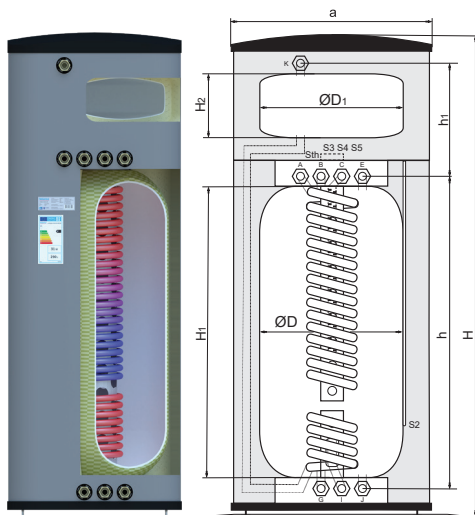
In order to prevent unwanted heat loss, all outer connectors must be insulated.

# DRAWINGS AND DIMENSIONS

## Important instructions for Drain Back model:



- The solar circuit must be protected with 1,5 bar safety relief valve
- Solar collectors must be installed by a minimum 2% or 2 cm/m inclination.
- Piping of solar circuit must be installed by a minimum of 5% or 5 cm/m inclination.
- Warning: The maximum allowed volume of a solar circuit, excluding the 40-liter draining reservoir, must be 1,5 times lower than the draining reservoir of 40 liters, i.e. 26 liters.



A - Cold water in  
B - Hot water out  
C - Boiler in  
E - Heating out

K - Solar in  
G - Solar out  
I - Boiler out  
J - Heating in

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

**CAUTION:** The following schemes are purely illustrative and does not make any claims on its completeness in every aspect! Realization of the installation should be done in accordance with the local standards and provisions.

### UNIQUBE DRAIN BACK MODEL - SOLAR STORAGE TANK, DOMESTIC WATER HEATER, STRATIFIED SEPARATOR STORAGE TANK

TYPE SQ-BPSW DB		310
D (diameter)	(mm)	620
D1 (diameter)	(mm)	600
H1 (height)	(mm)	1300
H2 (height)	(mm)	140
h (connectors)	(mm)	1470
h1 (connectors)	(mm)	370
H (height)	(mm)	2000
a (width)	(mm)	734
max. working temp.	(°C)	90
max. working pressure	(bar)	6
max. test pressure	(bar)	9
Net tank capacity	(liters)	290
Approx. weight	(kg)	104
S2 Solar sensor position	(mm)	1110
S3 DHW sensor position	(mm)	900
S4 Heating sensor position	(mm)	140
S5 Overheating protection	(mm)	140
Pivot measurement	(mm)	2130

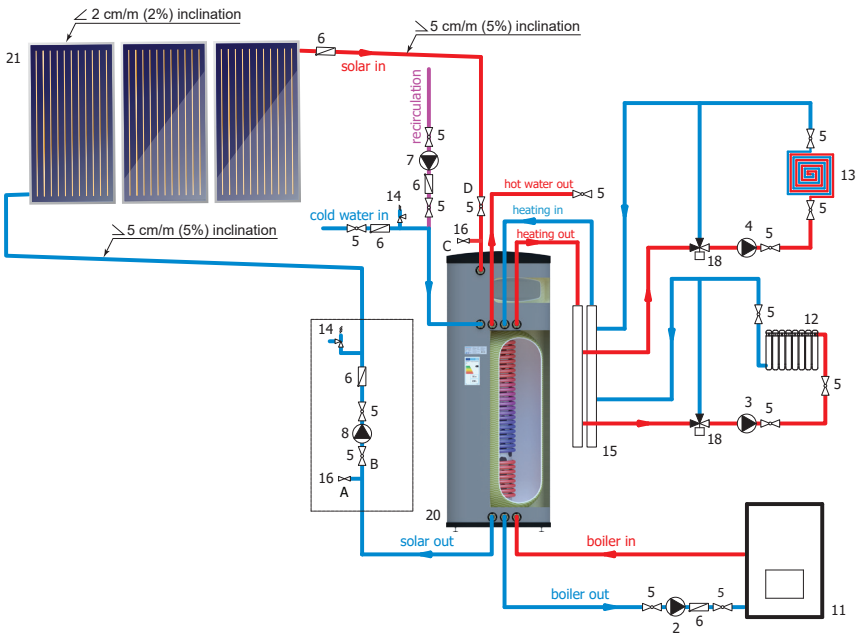
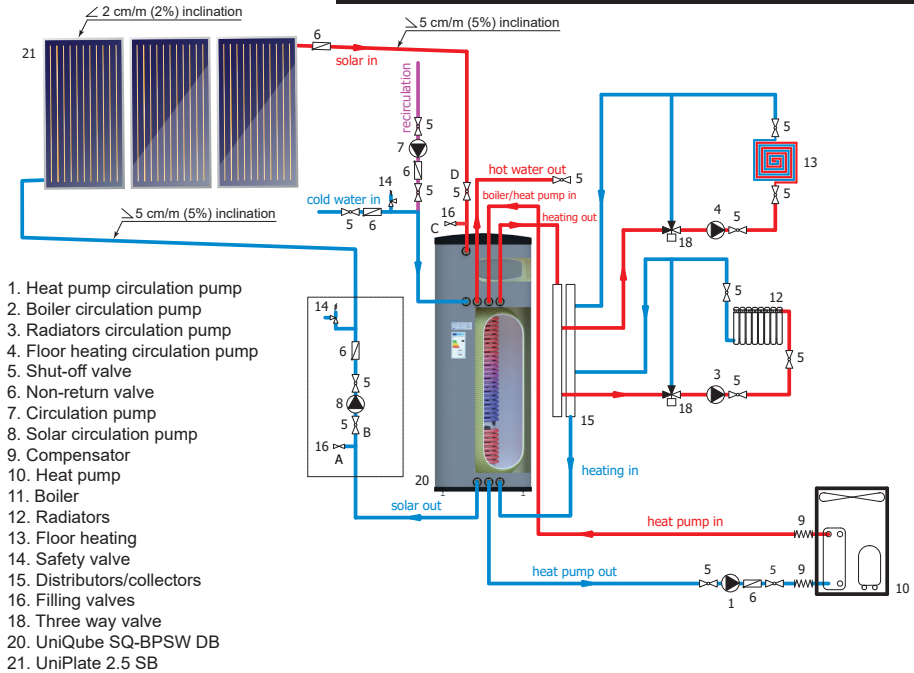
#### Solar heat exchanger

connections K, G		5/4"
max. working pressure	(bar)	1,5
max. test pressure	(bar)	2,5
capacity	(liters)	5
output area	(m <sup>2</sup> )	1,2
reservoir volume	(liters)	40

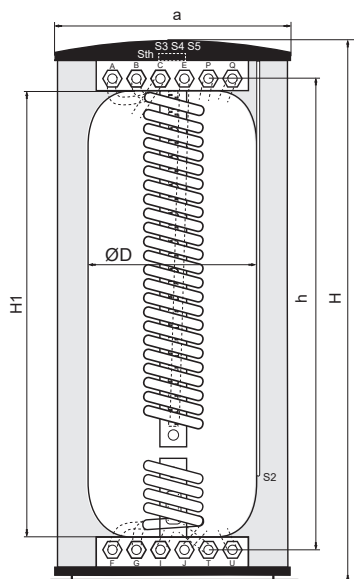
#### Water heat exchanger

connections A, B		5/4"
max. working pressure	(bar)	10
max. test pressure	(bar)	15
capacity	(liters)	15
output area	(m <sup>2</sup> )	3,8

# DRAWINGS AND DIMENSIONS



# DRAWINGS AND DIMENSIONS



- |                   |                   |
|-------------------|-------------------|
| A - Cold water in | F - Solar in      |
| B - Hot water out | G - Solar out     |
| C - Heating in    | T - Heat Pump In  |
| E - Heating out   | U - Heat Pump out |
| P - Heating in    | I - Boiler in     |
| Q - Heating out   | J - Boiler out    |

UNIQUEBE MODEL - COMBINED STORAGE TANK

TYPE SQ-BPSW-6C		310	440	800
D (diameter)	(mm)	620	620	890
H1 (height)	(mm)	1300	1730	1730
h (connectors)	(mm)	1320	1750	1750
connections C,E,P,Q,I,J,T,U		5/4"	5/4"	5/4"
H (height)	(mm)	1570	2000	2000
a (width)	(mm)	725	725	960
max. working temp.	(°C)	90	90	90
max. working pressure	(bar)	6	6	6
max. test pressure	(bar)	9	9	9
Net tank capacity	(litres)	290	413	773
Approx. weight	(kg)	104	130	160
S2 Solar sensor position	(mm)	1110	1550	1550
S3 DHW sensor position	(mm)	900	900	900
S4 Heating sensor position	(mm)	140	140	140
S5 Overheating protection	(mm)	140	140	140
Pivot measurement	(mm)	1730	2130	2219

Solar heat exchanger

connections F, G		5/4"	5/4"	5/4"
max. working pressure	(bar)	10	10	10
max. test pressure	(bar)	15	15	15
capacity	(litres)	5	8	8
output area	(m <sup>2</sup> )	1,2	2	2

Water heat exchanger

connections A, B		5/4"	5/4"	5/4"
max. working pressure	(bar)	10	10	10
max. test pressure	(bar)	15	15	15
capacity	(litres)	15	19	19
output area	(m <sup>2</sup> )	3,8	5	5

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

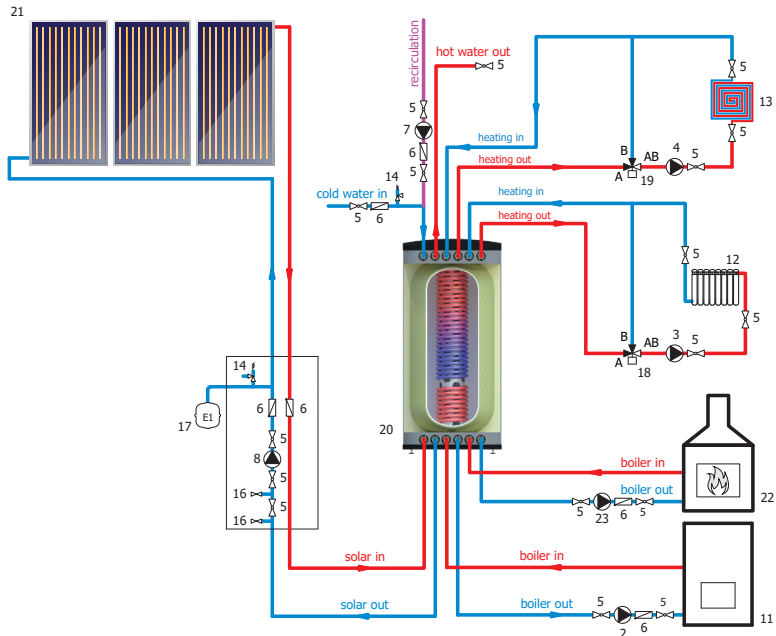
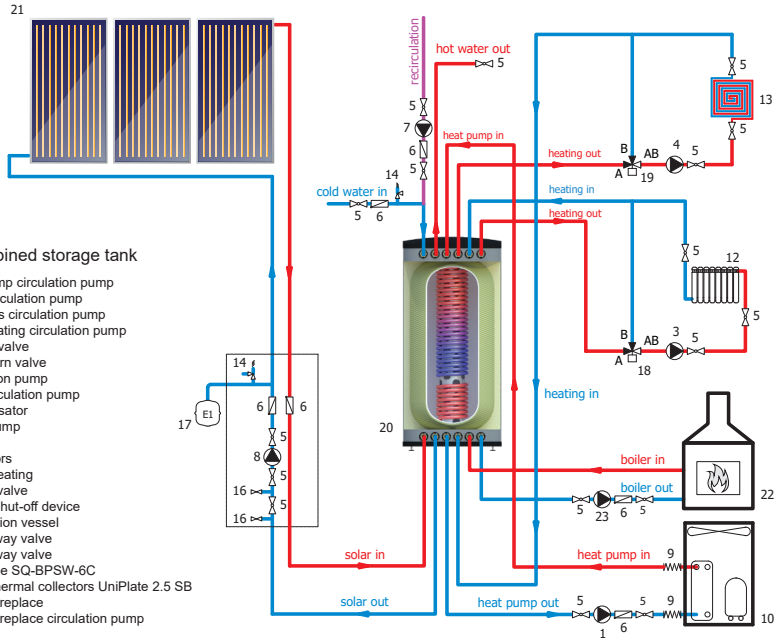
**CAUTION:** The following schemes are purely illustrative and does not make any claims on its completeness in every aspect! Realization of the installation should be done in accordance with the local standards and provisions.



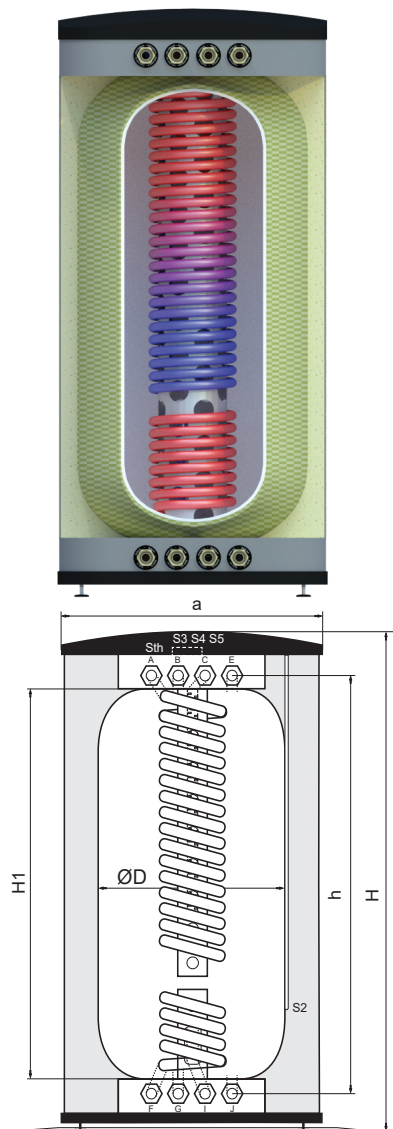
# DRAWINGS AND DIMENSIONS

## Combined storage tank

1. Heat pump circulation pump
2. Boiler circulation pump
3. Radiators circulation pump
4. Floor heating circulation pump
5. Shut-off valve
6. Non-return valve
7. Circulation pump
8. Solar circulation pump
9. Compensator
10. Heat pump
11. Boiler
12. Radiators
13. Floor heating
14. Safety valve
16. Filling shut-off device
17. Expansion vessel
18. Three way valve
19. Three way valve
20. UniQube SQ-BPSW-6C
21. Solar thermal collectors UniPlate 2.5 SB
22. Boiler fireplace
23. Boiler fireplace circulation pump



# DRAWINGS AND DIMENSIONS



A - Cold water in  
 B - Hot water out  
 C - Heating in  
 E - Heating out  
 F - Solar in  
 G - Solar out  
 I - Boiler in  
 J - Boiler out

## UNIQUBE MODEL - COMBINED STORAGE TANK

TYPE SQ-BPSW		310	440	800
D (diameter)	(mm)	620	620	890
H1 (height)	(mm)	1300	1730	1730
h (connectors)	(mm)	1320	1750	1750
connections C,E,I,J		5/4"	5/4"	5/4"
H (height)	(mm)	1570	2000	2000
a (width)	(mm)	725	725	960
max. working temp.	(°C)	90	90	90
max. working pressure	(bar)	6	6	6
max. test pressure	(bar)	9	9	9
Net tank capacity	(litres)	290	413	773
Approx. weight	(kg)	104	130	160
S2 Solar sensor position	(mm)	1110	1550	1550
S3 DHW sensor position	(mm)	900	900	900
S4 Heating sensor position	(mm)	140	140	140
S5 Overheating protection	(mm)	140	140	140
Pivot measurement	(mm)	1730	2130	2219

## Solar heat exchanger

connections F, G		5/4"	5/4"	5/4"
max. working pressure	(bar)	10	10	10
max. test pressure	(bar)	15	15	15
capacity	(litres)	5	8	8
output area	(m <sup>2</sup> )	1,2	2	2

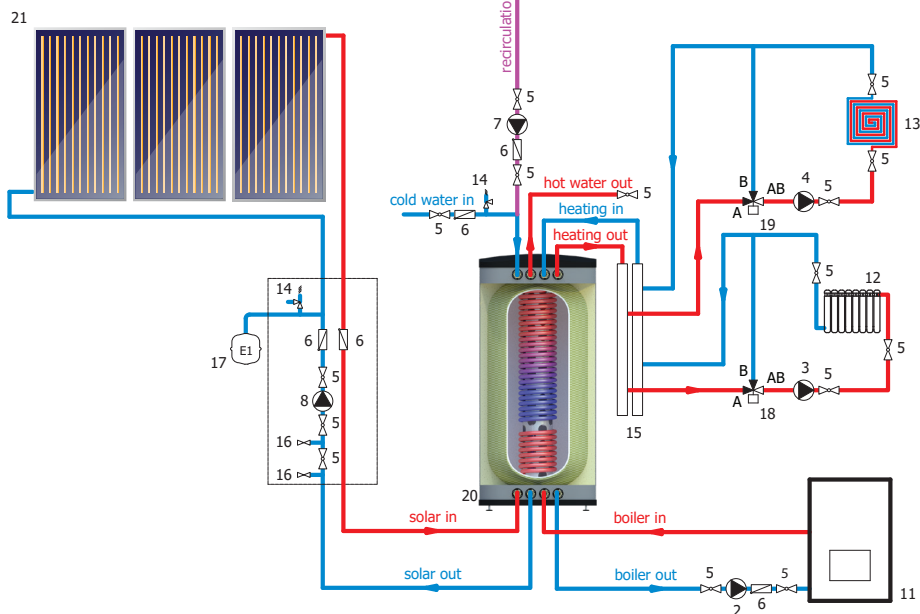
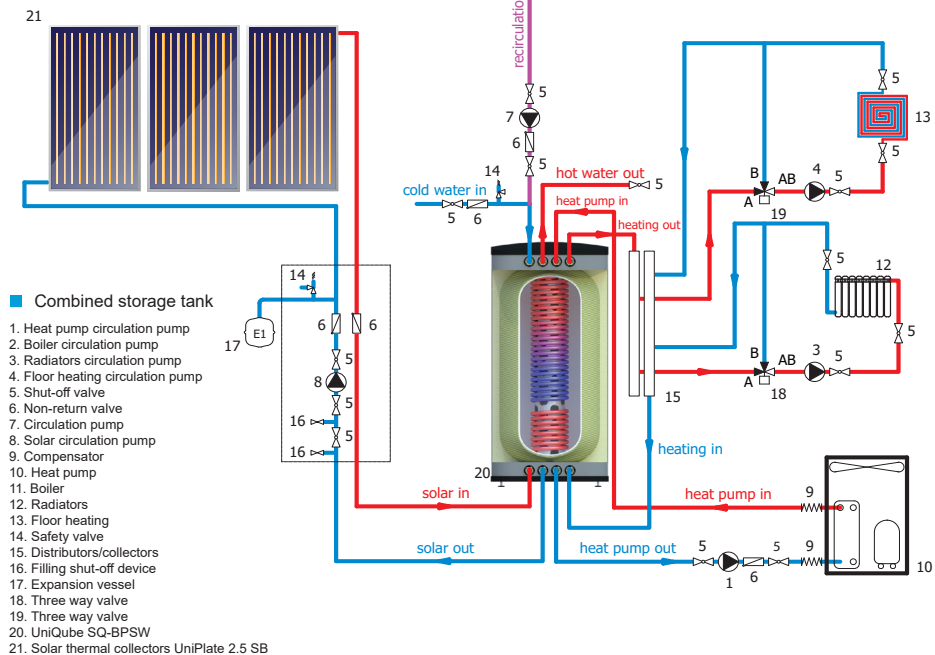
## Water heat exchanger

connections A, B		5/4"	5/4"	5/4"
max. working pressure	(bar)	10	10	10
max. test pressure	(bar)	15	15	15
capacity	(litres)	15	19	19
output area	(m <sup>2</sup> )	3,8	5	5

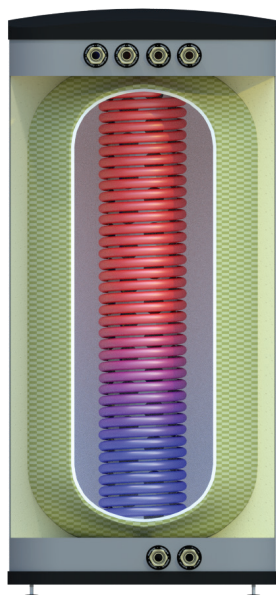
S2 - Solar sensor  
 S3 - DHW sensor  
 S4 - Heating sensor  
 S5 - Overheating protection  
 Sth - Electrical thermostat

**CAUTION:** The following schemes are purely illustrative and does not make any claims on its completeness in every aspect! Realization of the installation should be done in accordance with the local standards and provisions.

# DRAWINGS AND DIMENSIONS



# DRAWINGS AND DIMENSIONS



UNIQUBE MODEL - DOMESTIC WATER HEATER

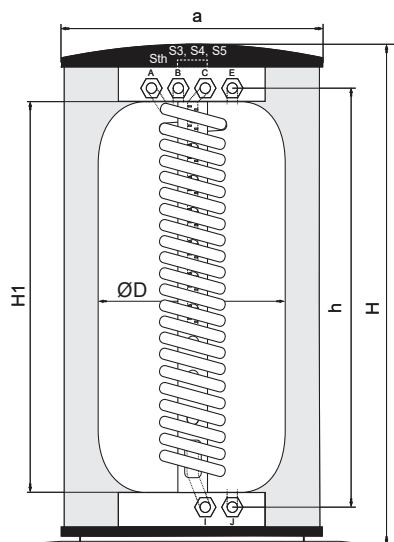
TYPE SQ-BPW HP READY		310	440	800
D (diameter)	(mm)	620	620	890
H1 (height)	(mm)	1300	1730	1730
h (connectors)	(mm)	1320	1750	1750
H (height)	(mm)	1570	2000	2000
connections C,E,I,J		5/4"	5/4"	5/4"
a (width)	(mm)	725	725	960
max. working temp.	(°C)	90	90	90
max. working pressure	(bar)	6	6	6
max. test pressure	(bar)	9	9	9
Net tank capacity	(litres)	295	421	765
Approx. weight	(kg)	97	122	147
S3 DHW sensor position	(mm)	900	900	900
S4 Heating sensor position	(mm)	140	140	140
S5 Overheating protection	(mm)	140	140	140
Pivot measurment	(mm)	1730	2130	2219

Water heat exchanger

connections A, B		5/4"	5/4"	5/4"
max. working pressure	(bar)	10	10	10
max. test pressure	(bar)	15	15	15
capacity	(litres)	20	27	27
output area	(m²)	5	7	7

A - Cold water in  
 B - Hot water out  
 C - Heating in  
 E - Heating out  
 I - Boiler in  
 J - Boiler out

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

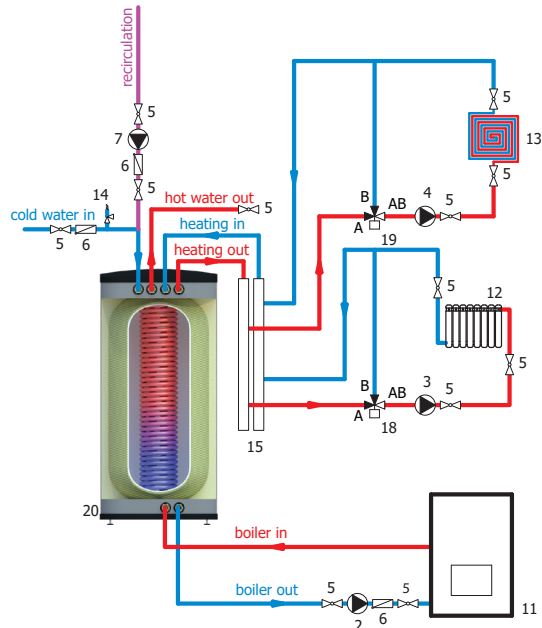
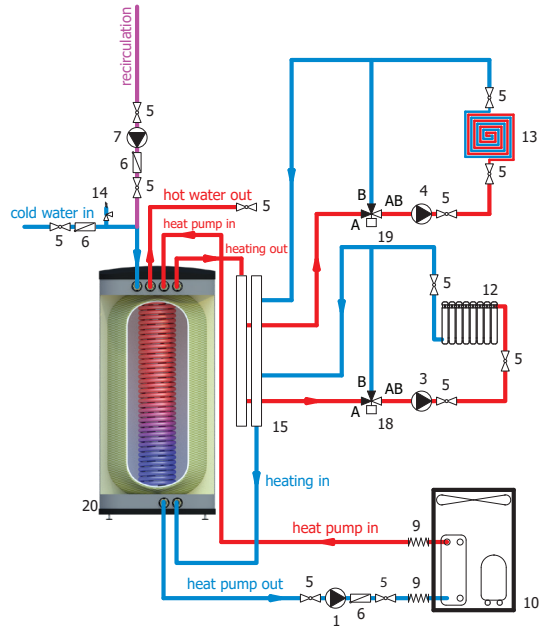


**CAUTION:** The following schemes are purely illustrative and does not make any claims on its completeness in every aspect! Realization of the installation should be done in accordance with the local standards and provisions.

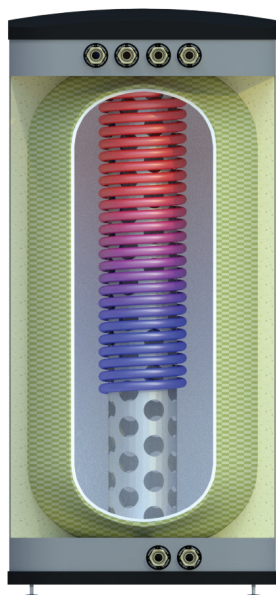
# DRAWINGS AND DIMENSIONS

## Domestic water heater

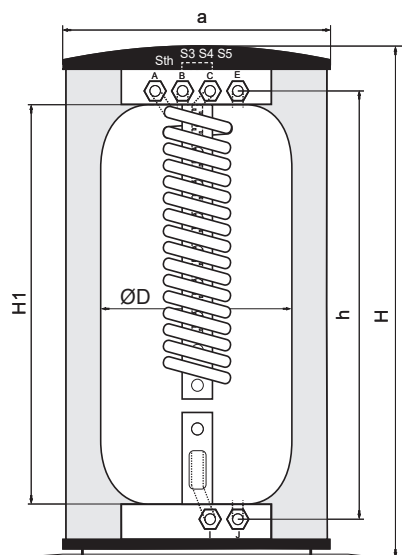
1. Heat pump circulation pump
2. Boiler circulation pump
3. Radiators circulation pump
4. Floor heating circulation pump
5. Shut-off valve
6. Non-return valve
7. Circulation pump
9. Compensator
10. Heat pump
11. Boiler
12. Radiators
13. Floor heating
14. Safety valve
15. Distributors/collectors
18. Three way valve
19. Three way valve
20. UniQube SQ-BPW



# DRAWINGS AND DIMENSIONS



UNIQUUBE MODEL - DOMESTIC WATER HEATER				
TYPE SQ-BPW		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
connections C,E,I,J		5/4"	5/4"	5/4"
a (width)	(mm)	725	725	960
max. working temp.	(°C)	90	90	90
max. working pressure	(bar)	6	6	6
max. test pressure	(bar)	9	9	9
Net tank capacity	(litres)	295	421	765
Approx. weight	(kg)	97	122	147
S3 DHW sensor position	(mm)	900	900	900
S4 Heating sensor position	(mm)	140	140	140
S5 Overheating protection	(mm)	140	140	140
Pivot measurement	(mm)	1730	2130	2219
Water heat exchanger				
connections A, B		5/4"	5/4"	5/4"
max. working pressure	(bar)	10	10	10
max. test pressure	(bar)	15	15	15
capacity	(litres)	15	19	19
output area	(m <sup>2</sup> )	3,8	5	5



A - Cold water in  
 B - Hot water out  
 C - Heating in  
 E - Heating out  
 I - Boiler in  
 J - Boiler out

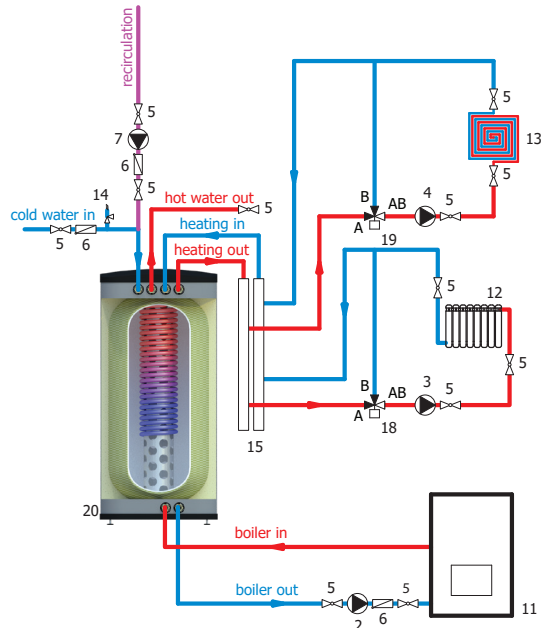
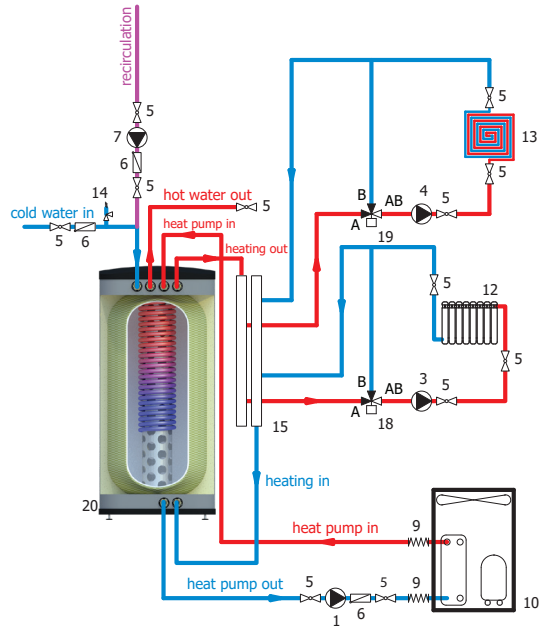
S3 - DHW sensor  
 S4 - Heating sensor  
 S5 - Overheating protection  
 StH - Electrical thermostat

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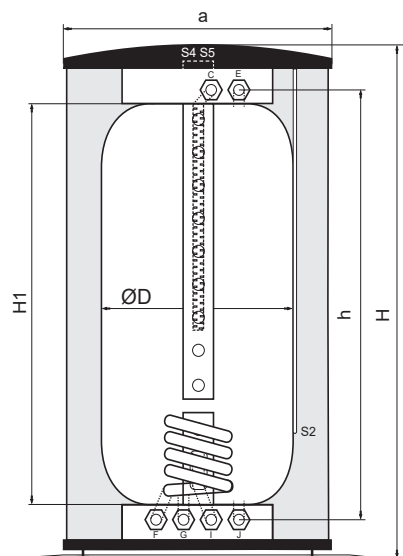
# DRAWINGS AND DIMENSIONS

## Domestic water heater

1. Heat pump circulation pump
2. Boiler circulation pump
3. Radiators circulation pump
4. Floor heating circulation pump
5. Shut-off valve
6. Non-return valve
7. Circulation pump
9. Compensator
10. Heat pump
11. Boiler
12. Radiators
13. Floor heating
14. Safety valve
15. Distributors/collectors
18. Three way valve
19. Three way valve
20. UniQube SQ-BPW



# DRAWINGS AND DIMENSIONS



UNIQUEBE MODEL - SOLAR STORAGE TANK

TYPE SQ-BPS		310	440	800
D (diameter)	(mm)	620	620	890
H1 (height)	(mm)	1300	1730	1730
h (connectors)	(mm)	1320	1750	1750
connections C,E,I,J		5/4"	5/4"	5/4"
H (height)	(mm)	1570	2000	2000
a (width)	(mm)	725	725	960
max. working temp.	(°C)	90	90	90
max. working pressure	(bar)	6	6	6
max. test pressure	(bar)	9	9	9
Net tank capacity	(litres)	305	432	784
Approx. weight	(kg)	91	114	137
S2 Solar sensor position	(mm)	1110	1550	1550
S4 Heating sensor position	(mm)	140	140	140
S5 Overheating protection	(mm)	140	140	140
Pivot measurement	(mm)	1730	2130	2219

Solar heat exchanger

connections F, G		5/4"	5/4"	5/4"
max. working pressure	(bar)	10	10	10
max. test pressure	(bar)	15	15	15
capacity	(litres)	5	8	8
output area	(m <sup>2</sup> )	1,2	2	2

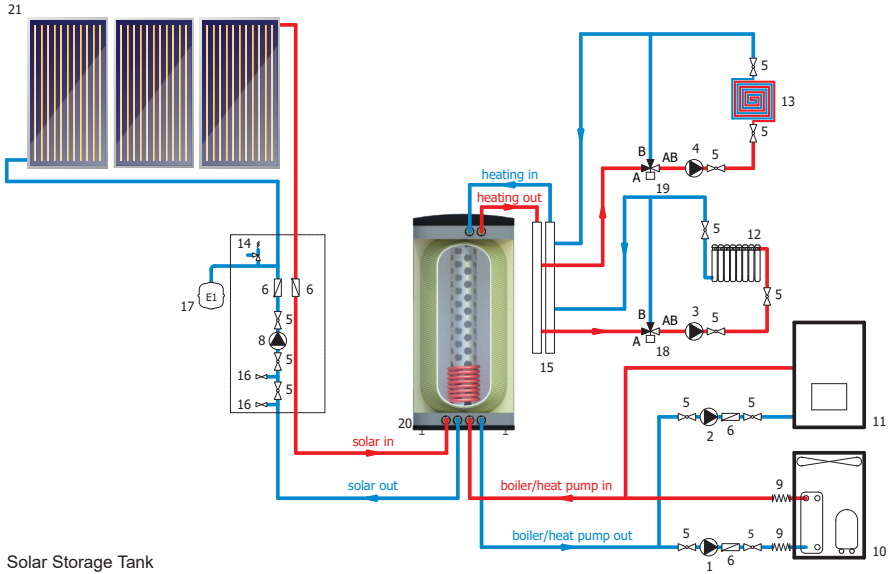
C - Heating in  
E - Heating out  
F - Solar in  
G - Solar out  
I - Boiler in  
J - Boiler out

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

**CAUTION:** The following schemes are purely illustrative and does not make any claims on its completeness in every aspect! Realization of the installation should be done in accordance with the local standards and provisions.



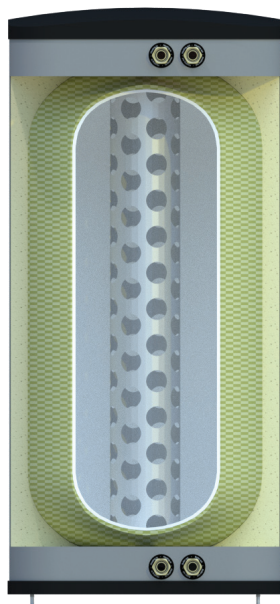
# DRAWINGS AND DIMENSIONS



## ■ Solar Storage Tank

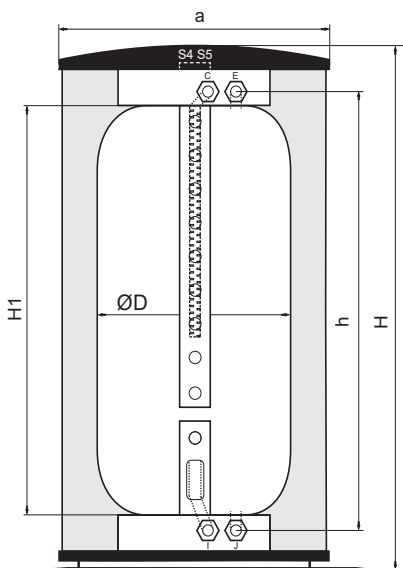
1. Heat pump circulation pump
2. Boiler circulation pump
3. Radiators circulation pump
4. Floor heating circulation pump
5. Shut-off valve
6. Non-return valve
8. Solar circulation pump
9. Compensator
10. Heat pump
11. Boiler
12. Radiators
13. Floor heating
14. Safety valve
15. Distributors/collectors
16. Filling shut-off device
17. Expansion vessel
18. Three way valve
19. Three way valve
20. UniQube SQ-BPS
21. Solar thermal collectors UniPlate 2.5 SB

# DRAWINGS AND DIMENSIONS



UNIQUEBE MODEL - SEPARATOR STORAGE TANK

TYPE SQ-BP		310	440	800
D (diameter)	(mm)	620	620	890
H1 (height)	(mm)	1300	1730	1730
h (connectors)	(mm)	1320	1750	1750
connections C,E,I,J		5/4"	5/4"	5/4"
H (height)	(mm)	1570	2000	2000
a (width)	(mm)	725	725	960
max. working temp.	(°C)	90	90	90
max. working pressure	(bar)	6	6	6
max. test pressure	(bar)	9	9	9
Net tank capacity	(litres)	310	440	800
Approx. weight	(kg)	85	106	127
S4 Heating sensor position	(mm)	140	140	140
S5 Overheating protection	(mm)	140	140	140
Pivot measurment	(mm)	1730	2130	2219

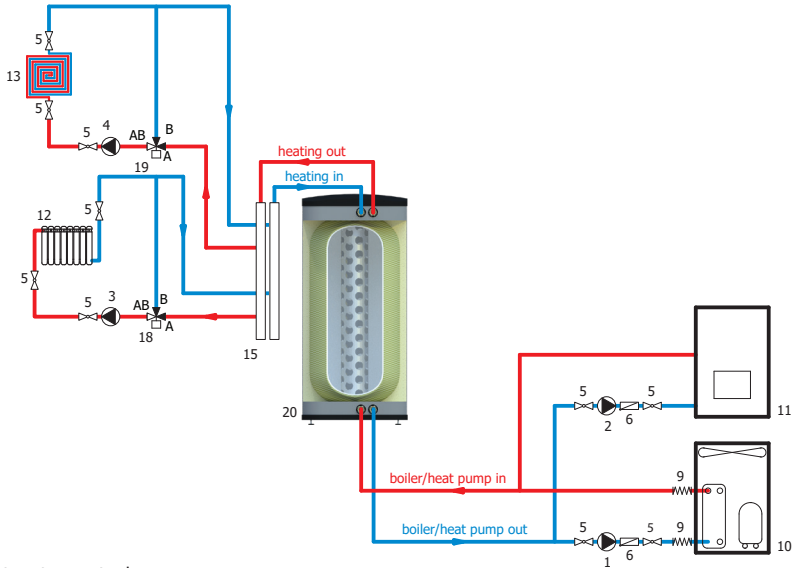


C - Heating in  
E - Heating out  
I - Boiler in  
J - Boiler out

S4 - Heating sensor  
S5 - Overheating protection

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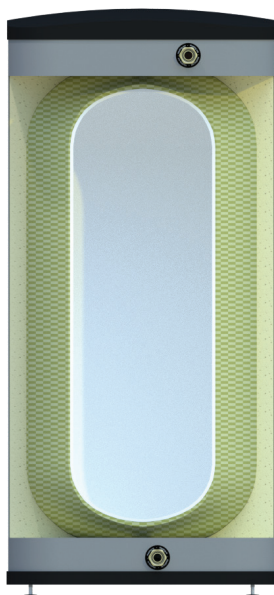
# DRAWINGS AND DIMENSIONS



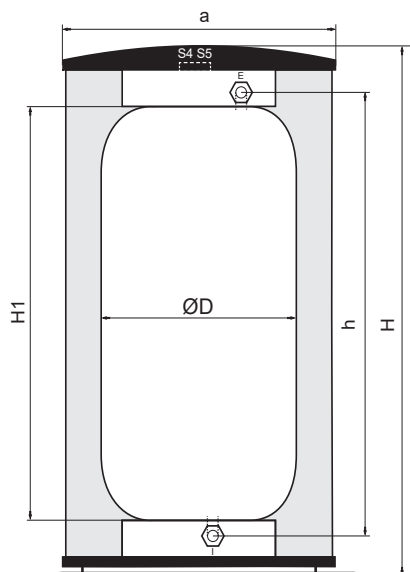
## ■ Separator storage tank

1. Heat pump circulation pump
2. Boiler circulation pump
3. Radiators circulation pump
4. Floor heating circulation pump
5. Shut-off valve
6. Non-return valve
9. Compensator
10. Heat pump
11. Boiler
12. Radiators
13. Floor heating
14. Safety valve
15. Distributors/collectors
18. Three way valve
19. Three way valve
20. UniQube SQ-BP

# DRAWINGS AND DIMENSIONS



UNIQUEBE MODEL - BUFFER STORAGE TANK				
TYPE SQ-B		310	440	800
D (diameter)	(mm)	620	620	890
H1 (height)	(mm)	1300	1730	1730
h (connectors)	(mm)	1320	1750	1750
connections E,I		5/4"	5/4"	5/4"
H (height)	(mm)	1570	2000	2000
a (width)	(mm)	725	725	960
max. working temp.	(°C)	90	90	90
max. working pressure	(bar)	6	6	6
max. test pressure	(bar)	9	9	9
Net tank capacity	(litres)	310	440	800
Approx. weight	(kg)	82	103	124
S4 Heating sensor position	(mm)	140	140	140
S5 Overheating protection	(mm)	140	140	140
Pivot measurement	(mm)	1730	2130	2219

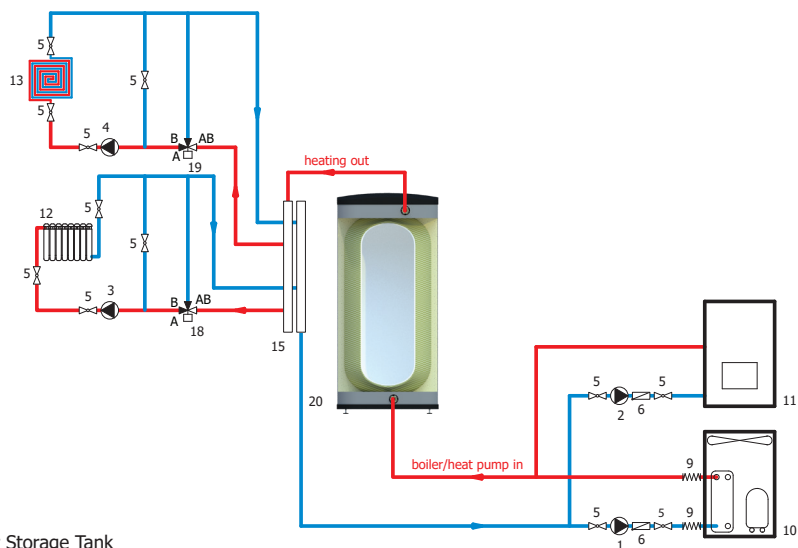


E - Heating out  
I - Boiler in

S4 - Heating sensor  
S5 - Overheating protection

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# DRAWINGS AND DIMENSIONS



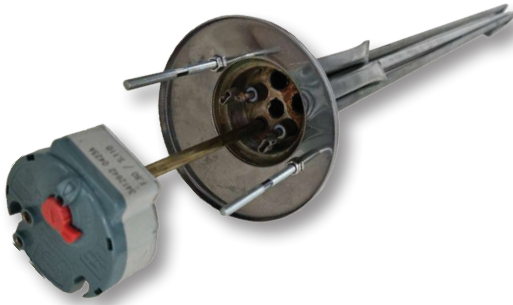
## ■ Buffer Storage Tank

1. Heat pump circulation pump
2. Boiler circulation pump
3. Radiators circulation pump
4. Floor heating circulation pump
5. Shut-off valve
6. Non-return valve
9. Compensator
10. Heat pump
11. Boiler
12. Radiators
13. Floor heating
14. Safety valve
15. Distributors/collectors
18. Three way valve
19. Three way valve
20. UniQube SQ-B

# ACCESSORIES

## Stainless steel electric heating elements with integrated thermostat

UniQube storage tanks can be equipped with top electric heaters on demand of the customer. Outlet connection of electric heating element is 6/4"



Storage Tank Capacity L	Connection	Length L mm	Cold Zone mm	Power W	AC Voltage V
310	6/4"	950	500	3000	230
440	6/4"	950	500	3000	230
800	6/4"	950	500	3000	230

In the table of technical parameters is specified location for installation of electric heating element

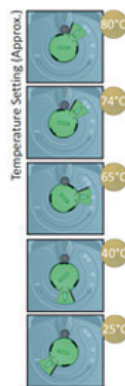
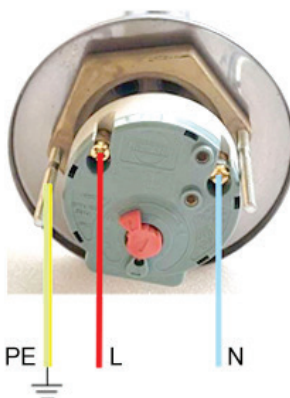
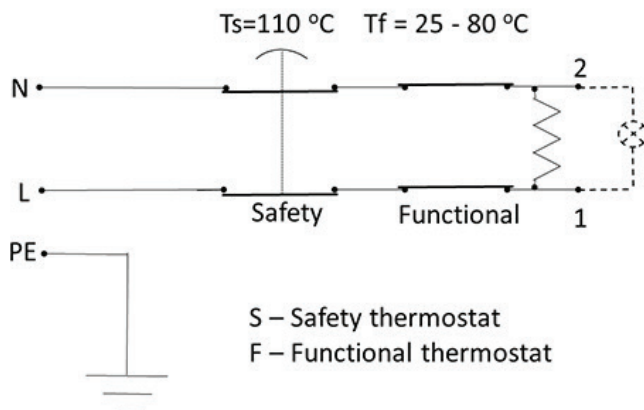


**DANGER:**

The connection of electric heating element to the electric power supply must be done by a qualified electricians.

When connect the heating element to the electric network, make sure that it is properly grounded.

## Connection scheme for stainless steel electric heating elements with integrated thermostat



### WARNING

All installation operations, including manual adjustments, must be fulfilled by a qualified specialist following all safety conditions.

# WARRANTY

## **Manufacturing defects and materials guarantee**

▪ Manufacturer expressly guarantees that the products it manufactures shall be free from defects in materials and workmanship which can prevent from normal operation under proper and normal use, installation and maintenance for the intended functions of the products, for a period set out in the warranty certificate of the respective water heater model you have bought. The warranty period begins from the date indicated in the purchase invoice. If a product or any component thereof is determined to be defective in manufacture or materials, Manufacturer will repair or replace the defective component or product

## **Exclusions and limitations of Warranty Coverage**

▪ The customer can claim warranty during warranty period of respective product immediately after any defects have been determined, except for in case of noticeable defects at the moment of purchase, in which case the customer must make the claim at the shop immediately after noticing the defect as it is provided for in the general conditions of sale.

1. Electric heating elements and thermostats
2. Accidents, installation on movable structures, negligence, improper care or nonconformity.
3. Failure to observe the installation, use and maintenance instructions set forth in the installation manual of respective product.
4. Improper installation and use as well as changes, especially if they are not made by authorized after-sale service personnel of Manufacturer.
5. Testing and operation pressures greater than values established by Manufacturer and set forth in product manuals, or use of water with characteristic values exceeding: Dissolvable salts – 500 mg/l; Calcium carbonate – 200 mg/l; Free carbon dioxide – 50 mg/l; pH content – minimum 6 and maximum 11) Freeze, flood, natural disasters or third party actions as well as any interventions into normal functioning conditions of water heaters and the control of Manufacturer.
6. Service trips to your home to teach you how to install, use, or maintain this water heater or to bring the water heater installation into compliance with local building codes and regulations.
7. Performance problems caused by improper sizing of the water heater or electric service voltage, wiring, or fusing.
8. Damages, malfunctions, or failures caused by abuse, accident, fire, flood, freeze, lightning, and the like.
9. Damages, malfunctions, or failures caused by operating the unit at water temperatures exceeding the maximum setting of the operating, or high limit, control.
10. Tank failures caused by operating the water heater when it is not supplied with water, free to circulate at all times.
11. Damages, malfunctions or failures caused by subjecting the tank to pressures greater than those shown on the rating label.
12. Damages, malfunctions or failures resulting from the use of any attachment, including any energy saving device, not authorized by Manufacturer.
13. Units that have had their rating labels removed. A water heater should not be operated if the rating label is removed.



- The warranty certificate is considered void for water heaters whose serial identification number has been modified, removed or blurred, or can not be expressly attested.
- Damages in the appearance of products shall not be considered as defects except for those ones which cause losses during operation or change technical characteristics of water heaters set forth in brochures.
- Manufacturer preserves the right, in case of replacement, to deliver another model of water heater in order to fulfill approved warranty claims when the original model is not being manufactured.

## **Labor, shipping, and processing costs**

This Limited Warranty does not cover any labor expenses for service, repairs, reinstallation, permits, or removal and disposal of the failed water heater, or defective component part(s). All such expenses are your responsibility.

Euroterm d.o.o. is not liable to pay any transportation costs for an "in-warranty" replacement water heater, or "in-warranty" replacement component part(s).

Euroterm d.o.o. does not authorize, recommend, or receive any benefit from any claims processing or similar fees charged by others to process warranty claims for any Euroterm d.o.o. water heater or component part(s). Euroterm d.o.o. will not reimburse any party for these, or any other, fees not specifically covered in this Limited Warranty document.

## **Claiming warranty**

Every customer who has purchased a water heater from Manufacturer and who has good reasons to lay a warranty claim, shall proceed as follows:

- Immediately notify in writing: The installer, or the company that has sold the water heater to him, or the distributor firm, or the commercial representative of Manufacturer in the region.

For this purpose the claimant shall fill out a claim form; the latter shall be accompanied by the document proving the purchase of the water heater (invoice) with the date of purchase in it.

- After receiving the claim form, Manufacturer considers it and makes decision whether the claim has grounds, and whether the defect is within the scope of the warranty set forth in this certificate for limited warranty; after which informs the customer as to its decision and the steps he shall do.

- The return of a product cannot be done without written authorization issued by the Quality Department. The return procedure shall be according to RMA (Return Material Authorization).

- If on customer's request, and when there is reason for urgency, the customer demands immediate replacement of the product he has claimed warranty for, before making the decision as to the claim, said request shall be accompanied by a Purchase requisition from the Commercial Department. After decision for satisfaction of the claim has been made, the Purchase requisition mentioned above will be annulled by issuing a receipt for returned goods; with this receipt the customer can purchase another product with the same price in case the claim has proved grounded.

- Manufacturer reserves the right to make in situ reports from the claims they have received for the purpose of checking every aspect that might be useful for better consideration of warranty claims; for this reason the customer shall not make any changes in installation conditions which are reasons for the claim without prior written consent of the Technical Department.

Euroterm d.o.o. , Lece Koteski 50, Industrial area Biljana, 7500 Prilep, R. North Macedonia, phone +389 48 419 415; fax +389 48 422 981 , e-mail: [info@solarico.eu](mailto:info@solarico.eu), web: [www.solarico.eu](http://www.solarico.eu)

# WARRANTY

## Limitation of liability

- Manufacturer is not liable before the customer, neither directly nor indirectly, for any non-fulfillment or delay at applying the warranty obligations which might originate from external pressure of other circumstances outside Manufacturer.
- The liability of Manufacturer under this Warranty Certificate is limited to the abovementioned obligations and up to the sum in accordance with the purchase receipt of the product to be claimed; excluded is any liability for indirect damages such as loss of data at information applications, loss of production, thermal variations at the service, etc. which do not violate the applicable regulations of any country concerning product liability.
- Above mentioned warranty limitations will be applied in any cases, and when they do not violate the regulations in any country concerning product liability. If this circumstance annuls some of preceding clauses, annulment will refer only to this clause, while the others will remain valid. In conclusion, excluded is application of any Regulation pointed out in this Warranty which violates the Law 23/July 10, 2003 and Directive 1999/44/EU concerning water heaters and their use on the territory of the EU.
- Any other warranty right that is not mentioned in this Warranty Certificate is excluded

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

# www.solarico.eu

## GUARANTEE

Type

Serial number

Guarantee

**Tank: 30 years**  
**Heat Exchangers: 10 years**

Manufacturing date

Signature

# Solarico<sup>®</sup>

**Euroterm d.o.o.**  
**Lece Koteski 50**  
**Industrial area - Biljana, Prilep**  
**Republic of North Macedonia**  
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**fax +389 48 422 981**  
**e-mail: info@solarico.eu**