

SOLIMPEKS



Solimpeks Domestic Hot Water Tanks

Guide For Installation And Use



SOLIKOMBI 300

SOLIKOMBI 500

SOLIKOMBI 800

SOLIKOMBI 1000



SOLITANK 200

SOLITANK 300

SOLITANK 500

SOLITANK 800

SOLITANK 1000



SOLIBUFFER 50

SOLIBUFFER 100

SOLIBUFFER 200

SOLIBUFFER 300

SOLIBUFFER 500

SOLIBUFFER 800

SOLIBUFFER 1000

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MEANING OF WARNINGS AND SYMBOLS

Information

This symbol indicates user tips and particularly useful information



DANGER

It indicates a possible dangerous situation.

Failure to observe the warning may result in serious injury or death.



ATTENTION

Indicates a possible warning or caution situation.



CENTER OF GRAVITY

The center of gravity of the load. If the center of gravity does not correspond to the geometric center of gravity, this mark is applied.



ELECTRIC CURRENT

It may cause death or injury.



RECYCLING

Symbol indicating whether the packaging is recyclable or recovery.



Risk of burn or injury.



The symbol indicates that you should protect the material inside the package from moisture.



Solimpeks is a company that produces 1st class quality boilers using manufacturing methods supported by high technology.

When it comes to using renewable energy, the choice of hot water storage tank is crucial. Solimpeks product models are very practical to use due to their high energy efficiency, space-saving design, hygienic water, and maintenance-free operation.



Solimpeks boilers are high performance products designed by utilizing different heat sources (solar, heat pump etc.). In addition, optional equipment that can also benefit from electrical energy is offered to our users.



The hot water stored in the tank is used both for heating support and for heating domestic water. Because the water in the Chrome-Nickel 316L spiral structure in the tank is heated instantly, this type of boiler is called hygienic boiler.



Solimpeks boiler products are made of 3 mm HRP 6222 sheet material and since the water stored in the tank is filled once, no corrosion occurs in any way. An anode rod and similar corrosion protection materials are not required. Maintenance work such as replacing the anode rod or cleaning the boiler is therefore not necessary.



50-500 liters of 50mm thick, 40 kg / m³ density high strength rigid polyurethane insulation material is used in Solimpeks boiler in order to minimize heat losses. Sponge insulation with a density of 18 kg/m³ in 500,800 and 1000 lt is used.

If the heat output of individual DHW boilers is not sufficient, more boiler modules can be connected together. (See Figure 5-6)

It takes up little space as it is mounted vertically. Thanks to the fixed legs on it, there is no need to make a separate coffee table.

Solimpeks boiler products are manufactured in accordance with standards. However, improper use may result in serious injury or property damage.

In the factory, all equipment in the boiler is checked and tested for leaks according to the standards.

This booklet, which has been prepared for the Solimpeks branded product you have preferred, contains information on use and maintenance, as well as introductory and technical data about the product, summarized information on installation and commissioning.

Please read this booklet before you start using the product and keep it for future reference.

Provided that the principles, warnings and standards specified in the user manual are complied with, your device is under Solimpeks warranty.

The warranty period starts from the date of delivery of the device

and lasts for 5 years. Electrical device failures are only covered by

a 1-year warranty.
















Automatic control failures are only covered by a 1-year warranty.


















The product warranty provided by Solimpeks does not cover malfunctions arising from the failure to use the device under normal conditions of use.

Malfunctions, problems and damages that may occur under the following conditions will not be covered by the warranty.















- If any operation is not carried out by the authorized service in accordance with the installation manual.
- Malfunctions caused by failure to fulfill the installation, commissioning, use and maintenance conditions, the responsibilities specified in the user manual and the responsibilities of the customer.
- Failures and damages caused by improper storage and environmental conditions by the customer.
- Malfunctions that may occur in the device in case of incorrect connection during boiler electrical connection.
- Malfunctions and problems that may occur in the device if the technical specifications (water pressure, voltage value, fuse value, grounding, etc.) specified in the user manual are not suitable, not constant or variable in order to ensure standard and trouble-free operating conditions of the device.
- Malfunctions that may occur on the product due to the failure of the consumer to perform periodic maintenance and controls on time.
- Failures caused by applications installed as open system, (corrosion and sediment formation, freezing of the system).
- Failure to provide adequate frost protection and damage caused by freezing of the system.
- Natural disasters (fire, flood, earthquake, hail, etc.) and external/physical external factors not caused by the product.
- Errors arising from the user's failure to perform periodic maintenance and controls.
- In the event that the original serial number, which must be found on the product, is erased or worn out.



IMPORTANT WARNINGS

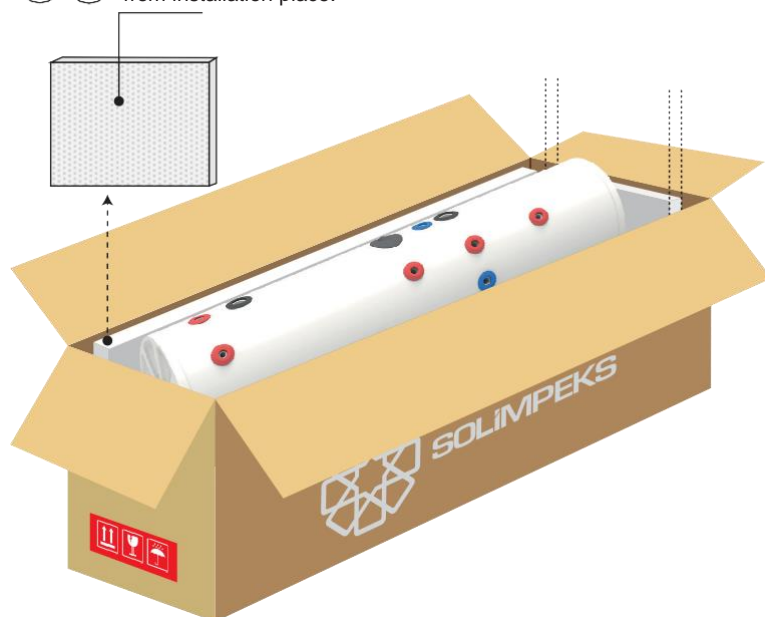
-  The chemical imbalance of the water supply can lead to reduced heating efficiency of the storage tank and related equipment. It is important to check the water chemistry before installing the storage tank as the water quality will affect the reliability of the system.
-  Scale formation can shorten the service life of the Chrome-Nickel 316L stainless steel in the boiler. In addition, a 1 mm thick layer of lime scale will cause a 10% yield loss.
-  Water with a pH below 6 can damage Chromium-Nickel 316L stainless steel. For this reason, it is generally recommended that the pH value of the materials used in the heating system should be between 8.2 and 10.
-  Safety and energy savings are important factors to consider when choosing the water temperature setting of an electric heater thermostat. The thermostat setting should be adjusted according to the place of use.
-  The electric heater may make some noise during operation. If the sound level becomes excessively loud, the electric heater needs to be cleaned.
-  If the water temperature is above 60°C, there is a risk of scalding. For this reason, by installing a mixing valve in the system, the domestic water temperature can be adjusted and limited to 35 60°C.
-  Before manually operating the safety relief valve on the boiler, make sure that no one comes into contact with the hot water coming out of this valve. This is because the water may be hot enough to pose a scalding hazard. To avoid injury or damage, the water should be directed to a suitable drain.
-  Water may drip from the safety valve drain pipe on the boiler and this pipe must be left open to the atmosphere. The pressure relief valve should be operated regularly to remove lime deposits and verify that it is not blocked. The discharge pipe of the pressure relief valve must be installed in a continuously downward and frost-free environment.
-  If the safety relief valve on the boiler periodically empties, this may be due to thermal expansion in a "closed" water system. Your supplier or authorized service center should be contacted about how to correct this.
-  If Solimpeks boilers are connected to a heating system with heating pipes, sludge and chips can enter the hot water boiler. For this reason, a strainer or sludge separator must be installed in the heating return line of the installation to prevent possible damage.
-  All safety valves in heating connections must comply with EN 1282 and domestic water installation connections must comply with EN 12897.
-  When the heating pump is off and there is no potable water use, a check valve should be used to prevent heat loss on the connection lines.
-  If the boiler will not be used for a long time and will be removed from the system, all connection points should be closed and protected against corrosion.
-  Boiler product groups should not be kept for too long in places where they will be directly exposed to sunlight.
-  Boiler product groups must be installed in a frost-proof manner.

-  Please read this manual carefully before starting the installation.
 -  The connection and mechanical installation of your device must be carried out by authorized persons in accordance with the relevant product connection diagram specified in this manual.
 -  Remove the packaging. Dispose of the packaging in an environmentally safe manner. When removing the packaging around the product, hard and sharp objects should not be used to prevent damage to the insulation material.
 -  The weight of the boiler must be suitable for the strength of the floor of the room where it will be installed. You can find the weight of the product you have purchased in the table of boiler weights in this booklet.
 -  To keep heat losses as low as possible, the connection pipes between the storage tank and the user should be insulated and as short as possible.
 -  Hot water pipelines should be insulated to prevent heat losses. Thermal insulation should be applied in accordance with country-specific instructions. Solimpeks recommends an insulation thickness of at least 9 mm.
- In installations where the distance between the boiler and the user faucet is too long, it should be preferred to install a recirculation line. In an installation with a recirculation line, the user does not have to wait for the hot water from the boiler to circulate through the pipes when he opens the tap. Since the pump to be used in the recirculation line will circulate the domestic water, a pump with a bronze body should be used for hygiene. The recirculation line should be constructed as shown in the installation diagrams.
-  In Solimpeks boiler product range, sensor sleeves are placed at the most suitable levels for the temperature distribution in the tank. Install the sensors as shown below in the locations indicated for each product without starting the system.
- After the mechanical installation connections are made in accordance with the boiler connection diagram,  make sure that the system is completely filled with water and there is no air inside. Air valves must be installed at the highest points to prevent air in the system and boilers.
-  Do not pressurize the boiler when you fill it with water. After the flow is cut off from the air valve on the boiler, the filling process should be completed.
 -  It is obligatory to install a safety valve on the boiler that provides 6 Bar pressure relief.
 -  Maximum 6 bar safety valve valve and pressure reducer should be installed on the boiler domestic water inlet and the outlet pressure value should be set to maximum 6 Bar.
 -  It is mandatory to use a maximum 6 bar safety valve valve for the solar energy line and the appropriate expansion tank according to the region to be installed.
 -  If Solimpeks boiler products are connected to the heating or underfloor heating system, a 3 bar safety valve must be installed on the line.
 -  If there is an electric heater in the boiler product group, have electrical work done by qualified persons. Never operate electrical components when the appliance is empty.
 -  Before starting work on live parts, they must be disconnected from voltage and secured against accidental activation.
 -  After finishing the connection of the product, the product and the mechanical installation should be checked for any leakage.
 -  The functionality of the recommended installation materials should be tested periodically.

PRODUCT CARRYING AND INSTALLMENT

-  Our products are shipped in their boxes and packaging in a way to be minimally affected by external weather conditions.
-   We recommend delivering the product directly to the installation site on the pallet and in the original packaging.
-  When receiving the product, please check that it is the model you ordered and that it has not been damaged during shipment.
-  Notify the authorized dealer of the damaged product or missing parts from the accessories sent with the product.
-   Solimpeks boiler product groups are heavy, so care should be taken when carrying the product to the place where it will be installed. You can find the weight of the product you have purchased in the table of boiler weights in this booklet.
-   You can unload the product to the installation site by a vehicle suitable for the tonnage of the product. When transporting with cranes and similar equipment, it should never be carried tightly with ropes over the boiler. Ropes can damage the insulation on the boiler by crushing it.
-   When lifting the storage tank on a wooden pallet and transporting on a pallet truck or wheelbarrow the danger of tipping over increases. Therefore, take appropriate safety precautions to prevent tipping.
-  The place where the product is to be placed must be strong enough to support the weight of the device and the device must be placed on a level surface.
-  During the installation of the device, the necessary areas should be left for service personnel to intervene in case of malfunction or replacement.
-  Our company does not accept responsibility for inefficient operation or physical damage to the boiler due to errors such as transportation and placement of the product.

-   Remove styrofoam foams from installation place.



100 - 200 - 300 Liters shipment



500 - 800 -1000 Liters shipment



The domestic hot water heat exchanger made of AISI 316L stainless steel provides almost twice the surface area compared to rigid tube applications. Larger surface area means better heat transfer capacity and higher efficiency.



In the stainless steel (AISI 316L) hose, a turbulent flow is generated which has an increased effect on heat transfer. The evaluation of laminar flow reverses the temperature stratification and reduces the flow velocity in the middle of the hose. These results show that compared to conventional pipe significantly improves heat exchanger performance with more than 50% extra performance.



Stainless steel (AISI 316L) tube bends continue to move as a result of constant thermal expansion and compression, this movement prevents the formation of scale and deposits on the hose surface. This ensures consistently high performance and minimum maintenance throughout its service life.



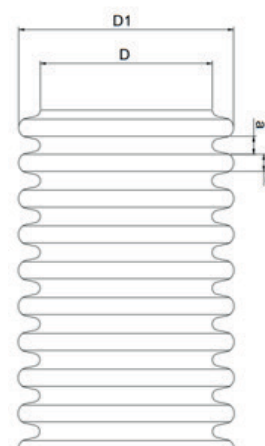
Selecting the correct coil diameter, tube diameter and pitch dimensions is crucial for heat exchanger performance. As the number of turns in the coil increases, the temperature drop of the hot fluid increases. The increase in the number of turns resulted in a higher heat transfer rate.



Since the domestic water is heated instantaneously from the Solimpeks heat exchanger, there is no growth of Legionella and other bacteria. For this reason, these types of boilers are also called hygienic boilers.



SOLIMPEKS HEAT EXCHANGERS		
Corrugated pipe		
D	(mm)	25,20
D1	(mm)	31,60
a	(mm)	3,20
b	(mm)	2,00
Tolerance		±0,30
Operating pressure	(bar)	11
Surface area per meter	(m ² /m)	0,218
Min. section area	(mm ²)	498,76
Volume	(m ³ /m)	0,724
Material		Inox 316L



Solikombi

- There are 2 heat exchangers in the Solikombi boiler and 4 sleeves connected to the tank body. The domestic water is heated instantaneously from the upper heat exchanger. The bottom heat exchanger is connected to solar energy to heat the inside of the tank. In the sleeves connected to the tank body, optionally the water in the tank can be heated with an external heater (heat pump, boiler) and used in the heating supply.
- Solikombi can store simultaneously in 3 different versions according to system requirements. Solar energy + domestic hot water + buffer tank.
- The hot water stored in the tank is used both for heating support and for heating domestic water.
- The 2 heat exchangers in the boiler are made of Chrome-Nickel 316L stainless steel.
- Since the domestic water is heated instantly, Legionella and other bacteria do not grow.
- Solikombi boilers can integrate more than one heat source.
- Optionally can be operated with electric heater.
- When choosing a solar heat source, this is the most efficacious model.
- Perfectly compatible with heat pumps.
- Anode rod and maintenance free.

SOLIKOMBI

300

500

800

1000

Product information

Energy efficiency class	-	C	D	E	E
Heat loss	W	85	140	195	220
Tank volume	Liters	245	460	850	1030

Basic data

Empty weight	kg	85	120	17	19
Full weight	kg	330	580	1025	1220
Dimensions (height/diameter)	mm	1700x540	1700x750	1730x1010	2030x1010
Maximum working pressure	Bar	6	6	6	6
Max permissible boiler water temperature	C	95	95	95	95
Outer Cylinder Material	-	Electrostatic powder painted SI 37 steel		Leatherette jacket	
Insulating material	-	Polyurethane 50mm 40 kg/m ³		Foam Rubber 80 mm	
Tank material	-	HRP		14kg/m ³	

Domestic water exchanger (stainless steel AISI 316L)

Water volume of the heat exchanger	Liters	12	13.5	22.5	27.5
Domestic water heat exchanger surface area	m	3.83	4.3	7.23	8.76
Maximum working pressure	Bar	6	6	6	6

Solar heating support (stainless steel AISI 316L)

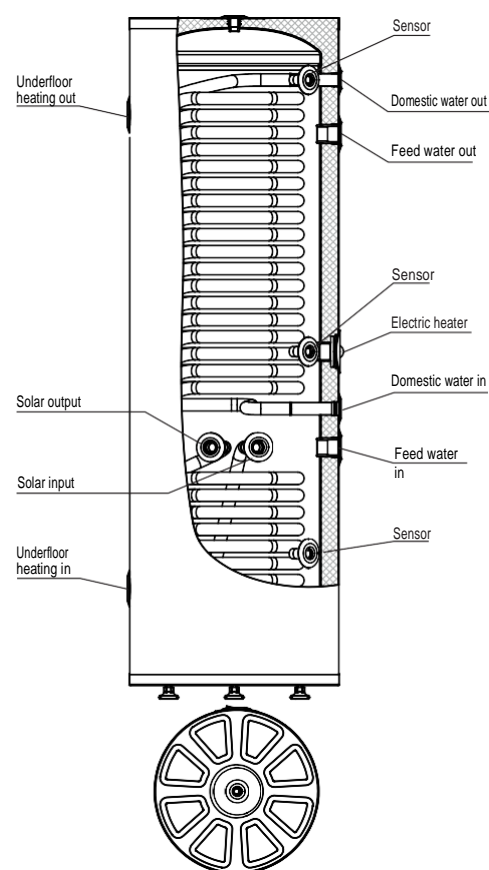
Water volume of the heat exchanger	Liters	5.7	6.6	6.6	8.2
Heat exchanger surface area	m ²	1.83	2.1	2.1	2.6
Maximum working pressure	Bar	6	6	6	6

Thermal output data

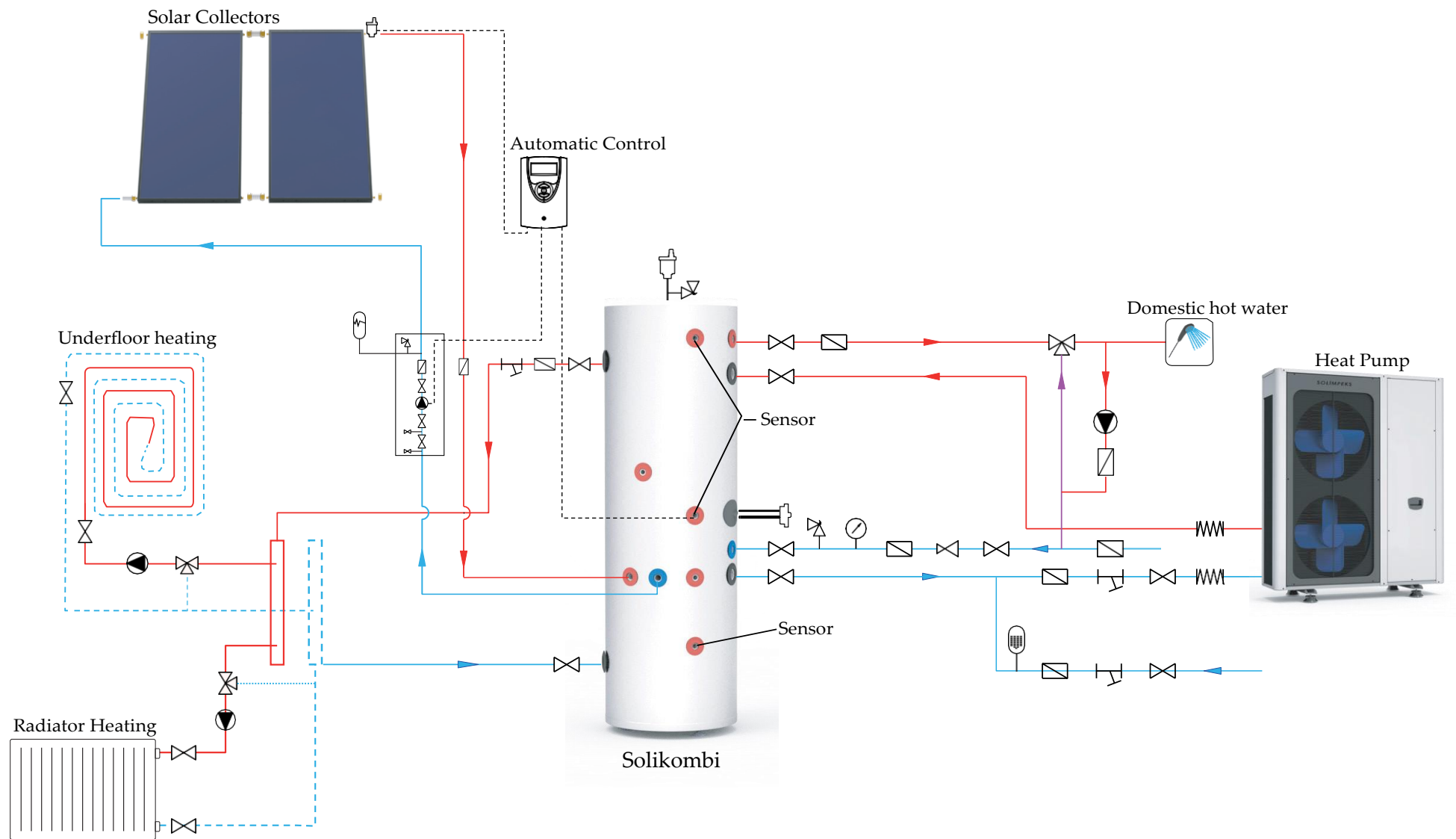
Amount of hot water without reheating at a discharge rate of 8 l/min	Liters	210	420	750	900
Amount of hot water without reheating at a discharge rate of 12 l/min	Liters	180	380	700	820

Pipe Connection

Feed water in/out	inch	1 1/4"	2"	2"	2"
Underfloor heating in/out	inch	1 1/4"	2"	2"	2"
Electric heater	inch	1 1/4"	2"	2"	2"
Domestic water in/out	inch	3/4"	3/4"	3/4"	3/4"
Solar input/output	inch	3/4"	3/4"	3/4"	3/4"
	inch	1/2"	1/2"	1/2"	1/2"



This picture belongs to solikombi 300.



✕ Valve

☐ Check Valve

⌵ Strainer

⌵ Compensator

⌵ Safety Valve

☐ Pressure Reducer

✕ Mixer Valve

⌵ Expansion Tank

⌵ Electrical resistance

⌵ Air vent

⌵ Pump

⌵ Manometer

Solitank

- There is 1 heat exchanger in the Solitank boiler and 4 sleeves connected to the tank body. The domestic water is heated instantaneously from the upper heat exchanger. In the sleeves connected to the tank body, the water can be heated by a heater (heat pump, boiler) and used in the heating supply.
- Solitank can store simultaneously in 2 different variants according to system requirements. Can be used as domestic hot water + buffer tank.
- The hot water stored in the tank is used both for heating support and for heating domestic water.
- The heat exchanger in the boiler is made of Chrome-Nickel 316L stainless steel.
- Since the domestic water is heated instantly, Legionella and other bacteria do not grow.
- Multiple heat sources can be integrated into the Solitank boiler.
- Optionally can be operated with electric heater.
- When choosing a non-solar heat source, this is the most efficient model.
- Perfectly compatible with heat pumps.
- Anode rod and maintenance free.

Energy efficiency class	-	C	C	D	E	E
Heat loss	W	74	85	140	195	220
Tank volume	Liters	170	245	460	850	1030

Basic data

Empty weight	kg	65	85	120	165	190
Full weight	kg	235	330	580	1015	1220
Dimensions (height/diameter)	mm	1200x540	1700x540	1700x750	1850x1010	2130
Max permissible boiler water temperature	°C	130	130	130	130	130
Maximum working pressure	Bar	6	6	6	6	6
Outer Cylinder Material	-	Electrostatic powder painted S1 37 steel			Leatherette jacket	
Insulating material	-	Polyurethane 50mm 40 kg/m³			Foam Rubber 80 mm	
Tank material	-	14kg/m³				

Domestic water exchanger (stainless steel AISI 316L)

Water volume of the heat exchanger	Liters	12	12	13,5	22,5	27,5
Domestic water heat exchanger surface area	m²	3.83	3.83	4.3	7.23	8.76
Maximum working pressure	Bar	6	6	6	6	6

Solar heating support (stainless steel AISI 316L)

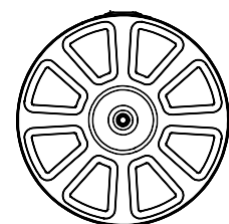
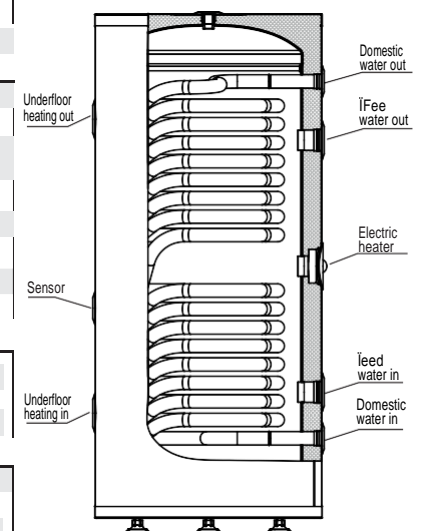
Water volume of the heat exchanger	Liters					
Heat exchanger surface area	m²					
Maximum working pressure	Bar					

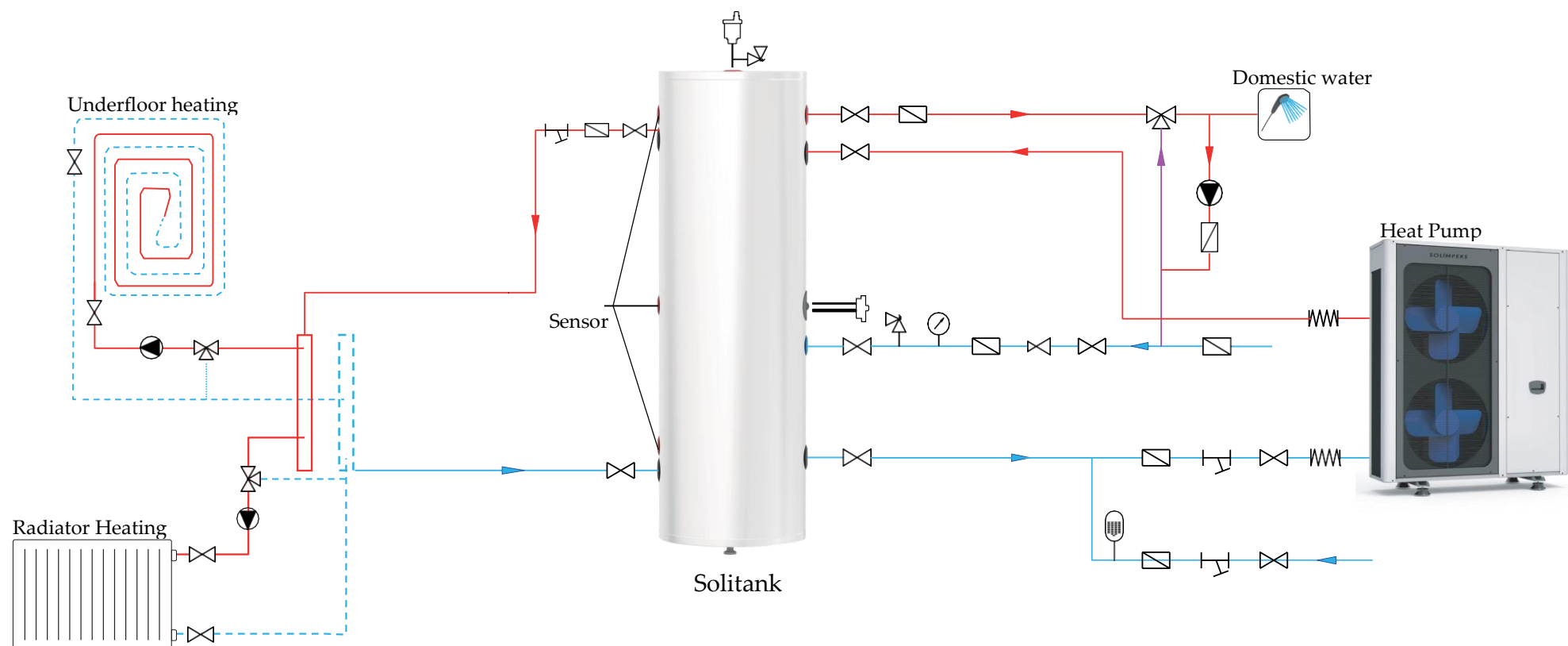
thermal output data

Amount of hot water without reheating at a discharge rate of 8 l/min	Liters	140	210	420	750	900
Amount of hot water without reheating at a discharge rate of 12 l/min	Liters	120	180	380	700	820

Pipe connection

Feed water in/out	inch	1 1/4"	1 1/4"	2"	2"	2"
Underfloor heating in/out	inch	1 1/4"	1 1/4"	2"	2"	2"
	inch	1 1/4"	1 1/4"	2"	2"	2"
	inch	3/4"	3/4"	3/4"	3/4"	3/4"
	inch	1/2"	1/2"	1/2"	1/2"	1/2"





Valve

Check Valve

Strainer

Compensator

Safety Valve

Pressure Reducer

Mixer Valve

Expansion Tank

Electrical resistance

Air vent

Pump

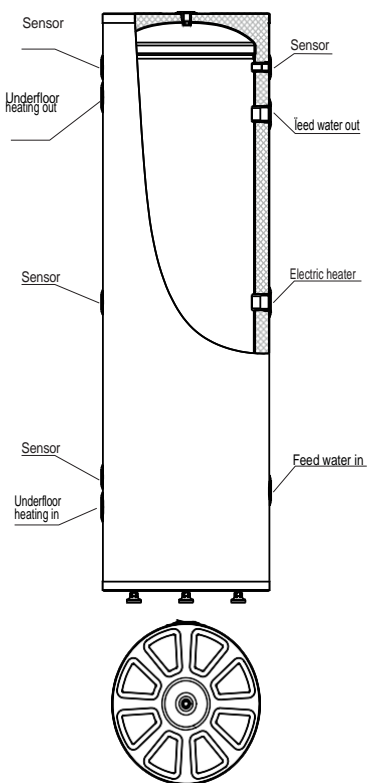
Manometer

Solibuffer

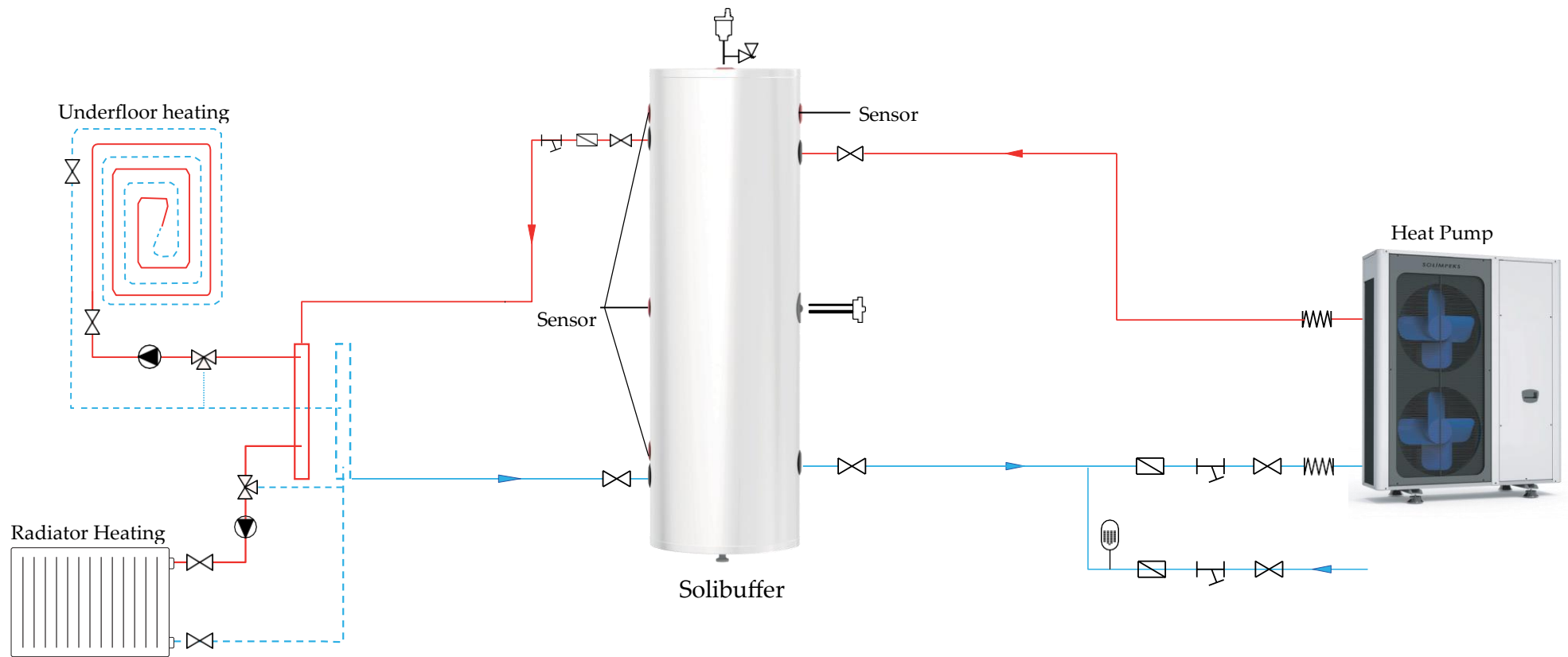
- There are 4 sleeves connected to the Solibuffertank body. The domestic water is heated instantaneously from the upper heat exchanger. In the sleeves connected to the tank body, the water can be heated by a heater (heat pump, boiler) and used in the heating supply.
- Extends the life of the heat pump by preventing it continuously running
- When the heat pump is in defrost mode, it prevents heat loss of the space to be heated.
- When choosing a non-solar heat source, this is the most efficient model.
- Multiple heat sources can be integrated into the Solibuffer boiler.
- Optionally can be operated with electric heater.
- Easy installation thanks to its compact design.
- Anode rod and maintenance free.

SOLIBUFFER

Energy efficiency class	-	B	B	B	C	D	E	E
Heat loss	W	38	45	55	85	140	195	220
Tank volume	Liters	50	100	170	245	460	850	1030
Basic data								
Empty weight	kg	15	50	60	80	115	140	160
Full weight	kg	65	150	230	325	575	990	1190
Dimensions (height/diameter)	mm	590x450	750x540	1200x540	1725x540	1700x750	185x1010	2130x1010
Maximum working pressure	Bar	6	6	6	6	6	6	6
Max permissible boiler water temperature	°C	130	130	130	130	130	130	130
Outer Cylinder Material	-	Electrostatic powder painted S1 37 steel					Leatherette jacket	
Insulating material	-	PU 25mm	Polyurethane 50 mm 40 kg/m³					foam Rubber 80 mm 14kg/m³
Tank material	-	HRP	HRP					
Domestic water exchanger (stainless steel AISI 316L)								
Water volume of the heat exchanger	Liters							
Domestic water heat exchanger surface area	m²							
Maximum working pressure	Bar							
Solar heating support (stainless steel AISI 316L)								
Water volume of the heat exchanger	Liters							
Heat exchanger surface area	m²							
Maximum working pressure	Bar							
thermal output data								
Amount of hot water without reheating at a discharge rate of 8 l/min	Litres							
Amount of hot water without reheating at a discharge rate of 12 l/min	Litres							
Pipe connection								
Feed water in/out	inch		1 1/4"	1 1/4"	1 1/4"	2"	2"	2"
Underfloor heating in/out	inch		1 1/4"	1	1 1/4"	2"	2"	2"
Electric heater	inch		1 1/4"	1/4"	1 1/4"	2"	2"	2"
Sensor	inch		1/2"	1	1/2"	1/2"	1/2"	1/2"



This picture belongs to solibuffer 300.



Valve

Check Valve

Strainer

Compensator

Safety Valve

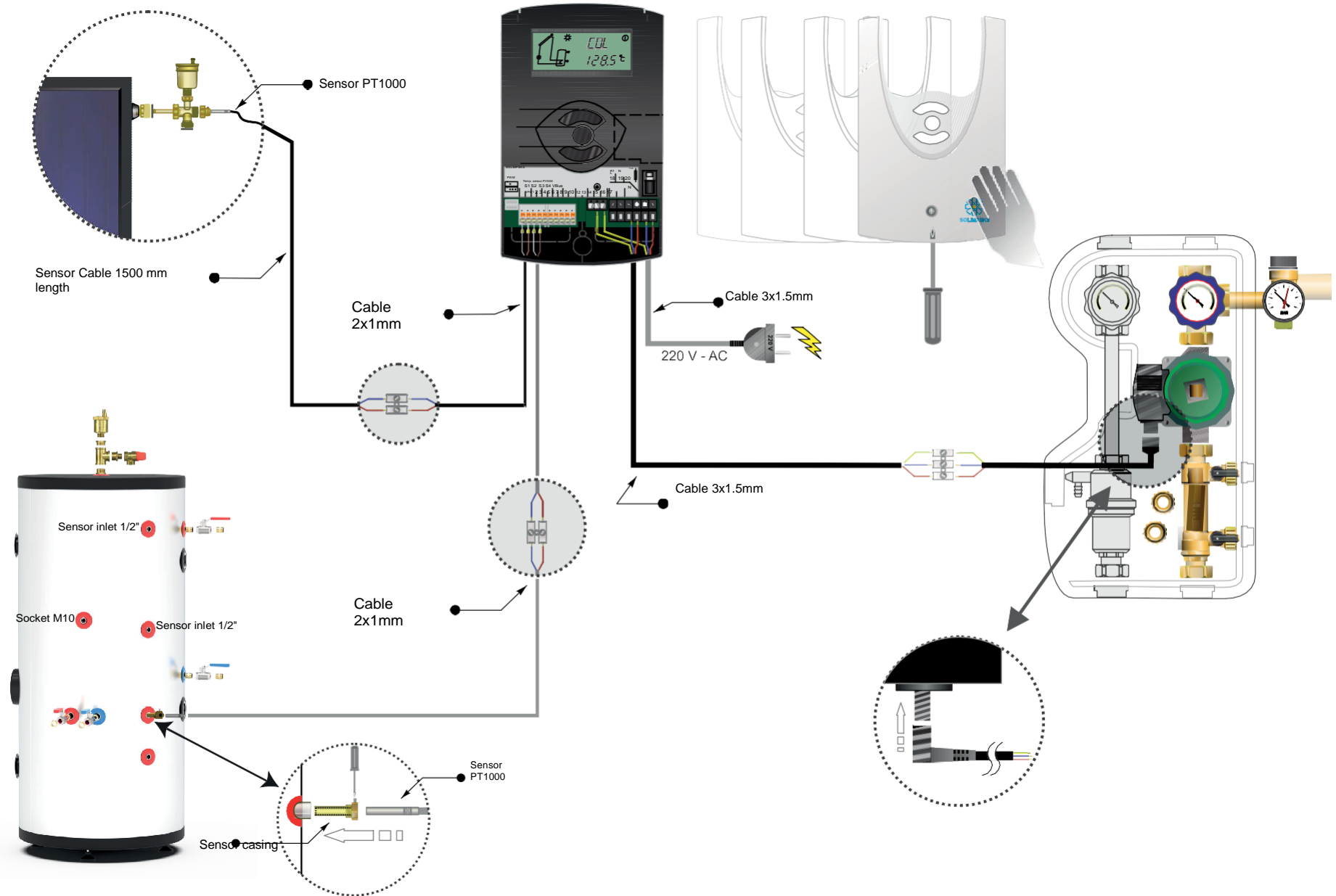
Mixer Valve

Expansion Tank

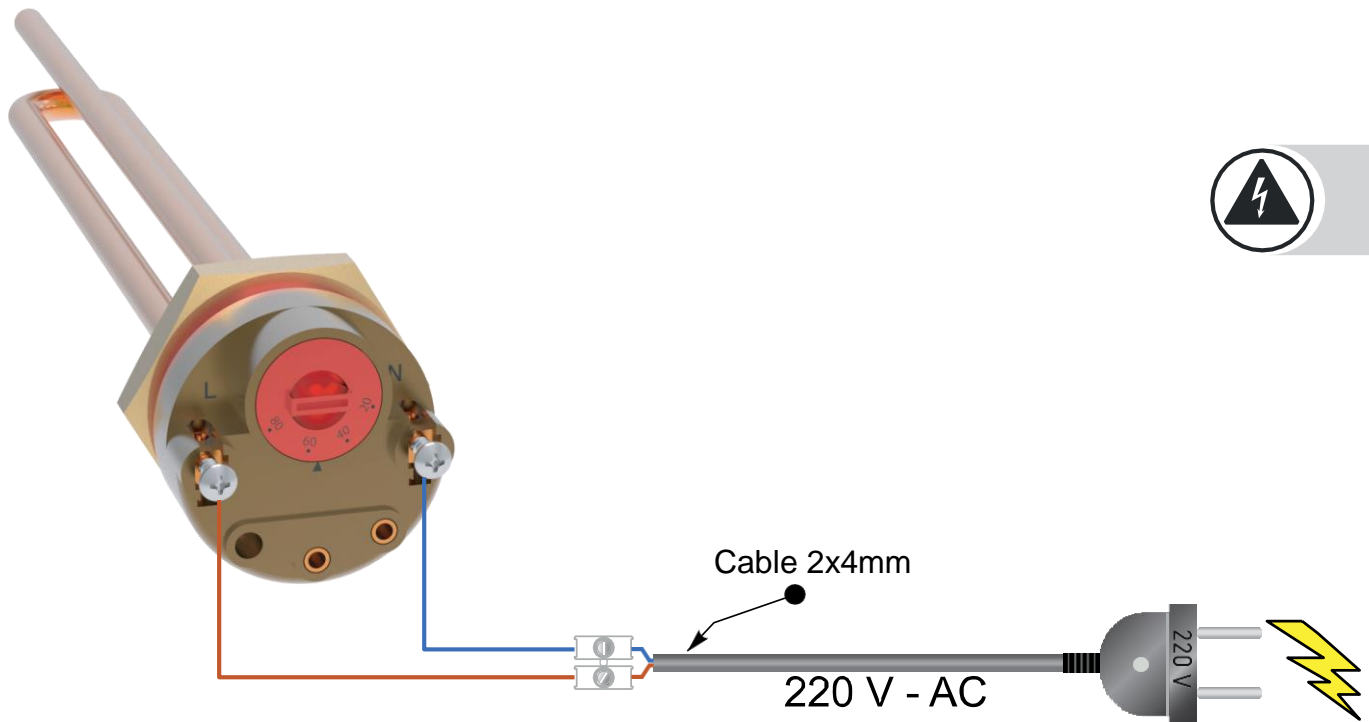
Electrical resistance

Air vent

Pump

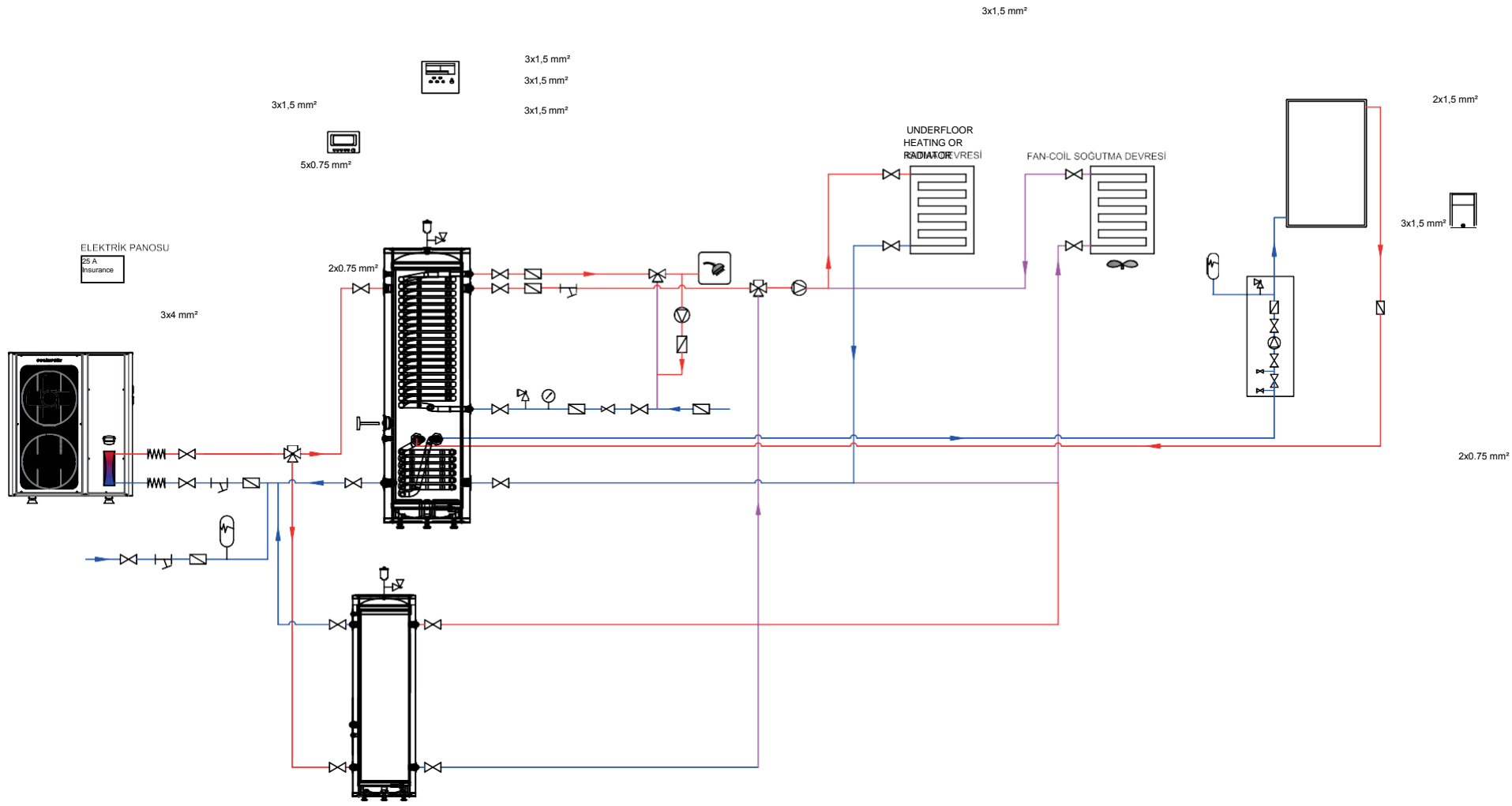


* All cables must be protected from sun shine



Tip	Features
Operating voltage	220 V / 50 Hz
Heating capacity	3 kW
Heat field	30-70°C
Cable length	—
Heating rod length	25 cm
Screw threads	R 1 1/4"
Compliance	All products

- Touching live parts can result in electric shock, causing life-threatening injuries and may cause burns.
- Before working on live parts, they must be disconnected from the power supply (switch off fuses, main switches) and secured against accidental activation.
- The electrical installation must only be carried out by qualified electrotechnical personnel in accordance with the applicable instructions as well as the instructions of the relevant electricity company.
- The electrical connection is not to the electric heater. Connection must be made to the thermostat.



OUTDOOR AIR SENSOR
North Section
It should be mounted out of
direct sunlight.

2x0.75mm²



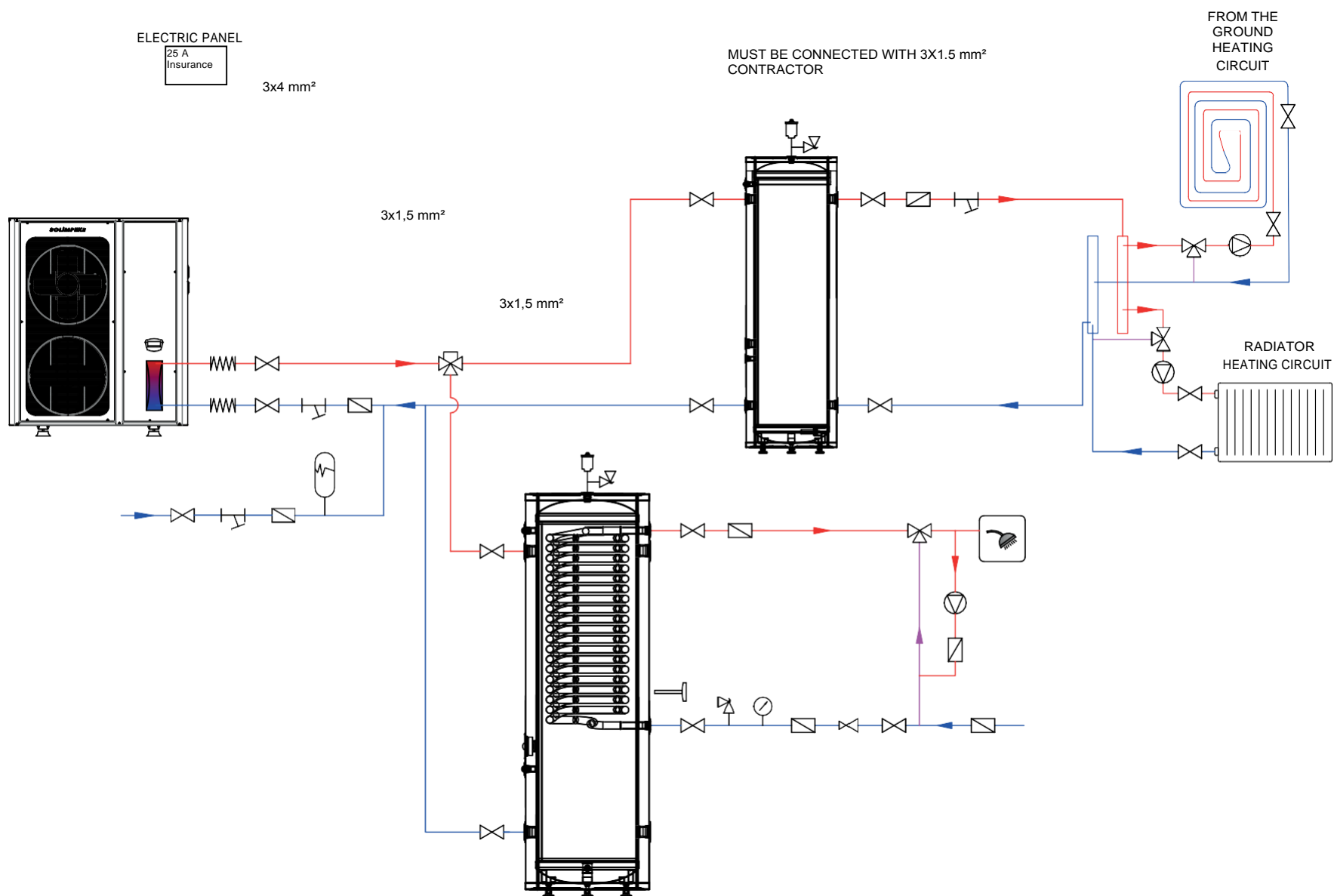
4x0.75 mm²
CONTROL PANEL

ELECTRIC PANEL

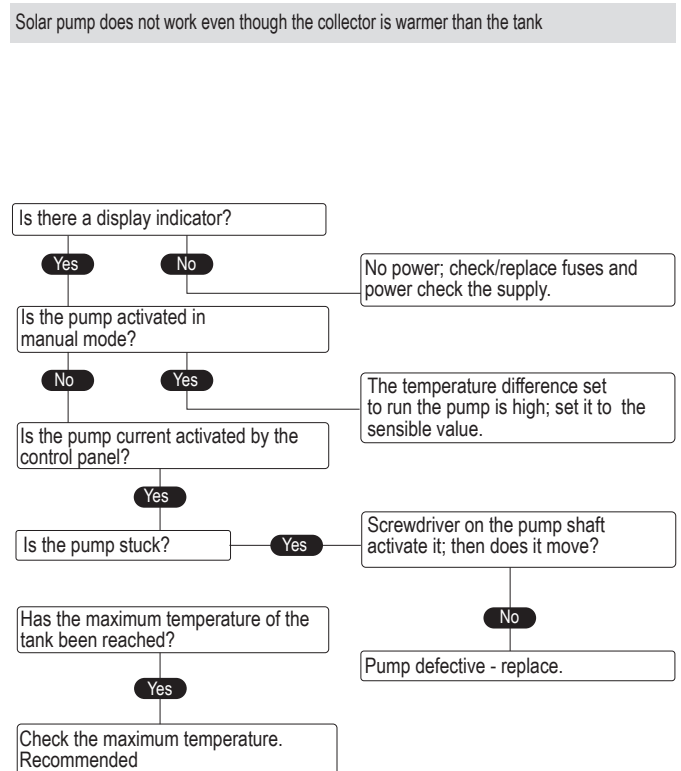
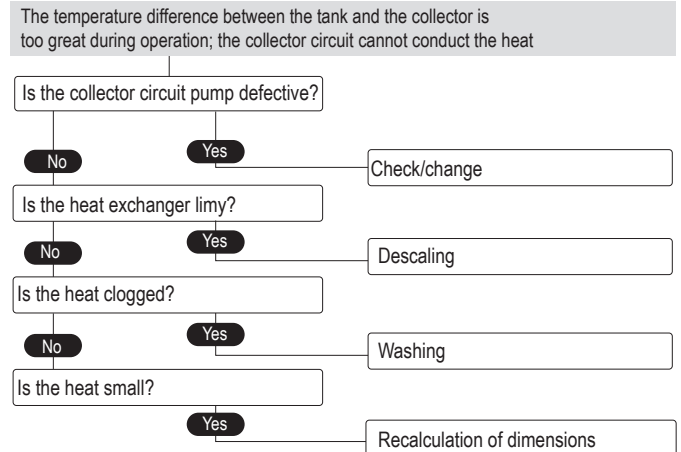
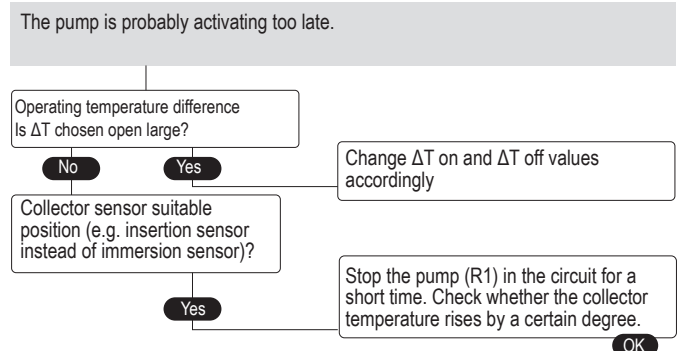
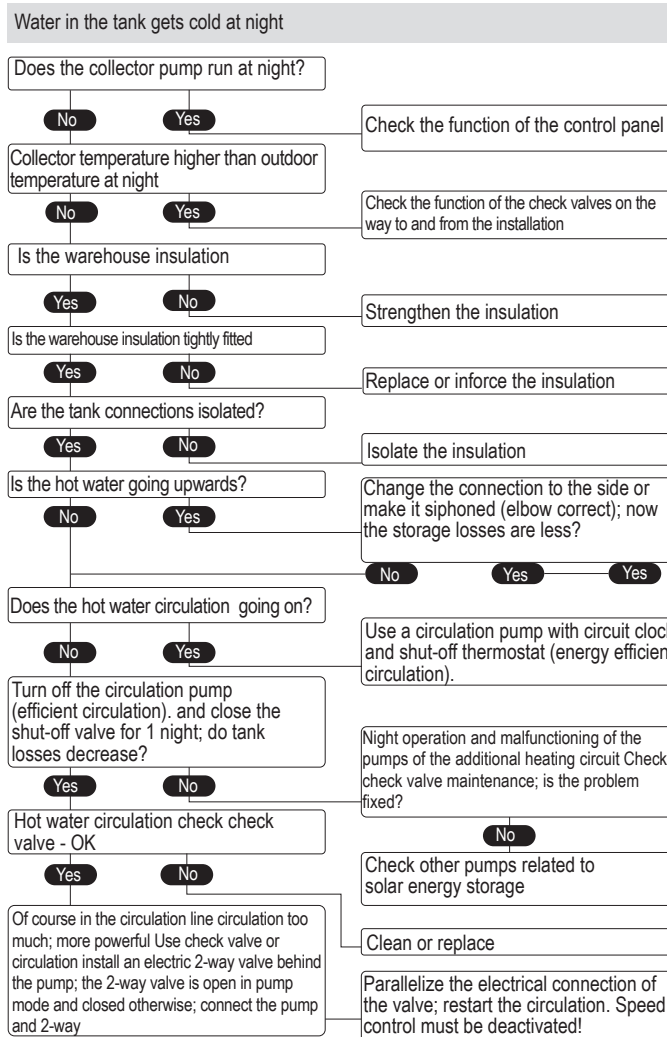
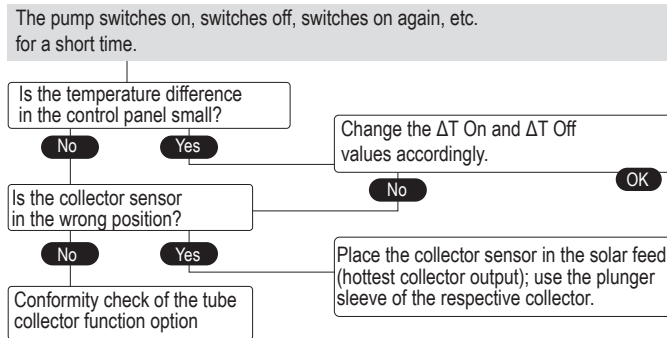
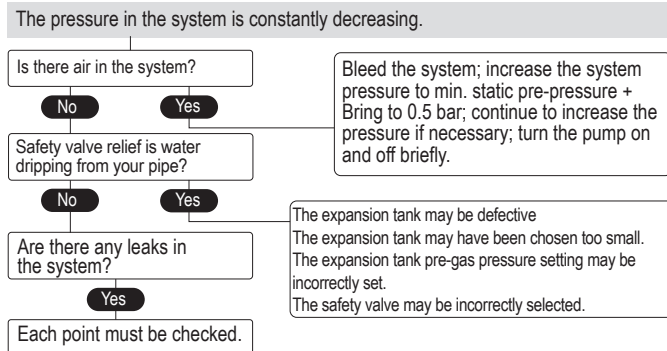
25 A
Insurance

3x4 mm²

MUST BE CONNECTED WITH 3X1.5 mm²
CONTRACTOR



Fault Detection



Important Notice

The texts and illustrations in this manual have been prepared with the maximum possible care and the latest information. However, since it is impossible to avoid mistakes, we would like to point out the following points:

Your project must always be based on your own calculations and planning in accordance with the applicable norms and instructions. We can give no guarantee that the illustrations and text published in this guide are complete, the descriptions herein are illustrative only. The use or application of the contents provided is in these cases at the sole risk of the respective user. The publisher cannot be held liable for inappropriate, incomplete or inaccurate information and any damage caused thereby.

Notes

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