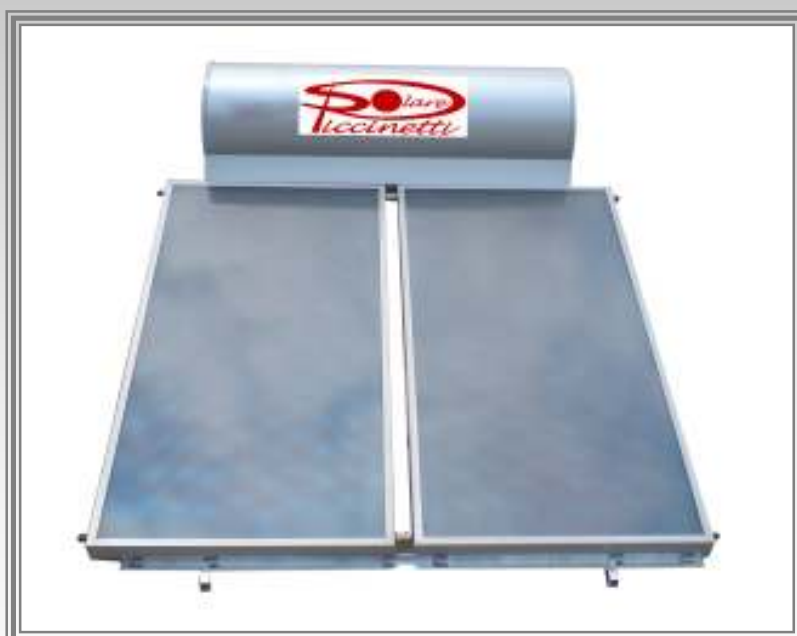


THERMOSIPHON (NATURAL CIRCULATION) SYSTEM A series

INSTALLATION INSTRUCTIONS
TECHNICAL ASSISTANCE



English version



Dear Customer,

Thank you for choosing the thermosiphon system of Piccinetti Solare, an innovative, modern and high quality product, which will function and provide you hot water for many years. The solar system is covered by Piccinetti Solare's long life warranty and a partners network will provide you the best Service.

PRODUCT RANGE

Piccinetti Solare thermosiphon systems are available in the following models:

Model	Code	Description
A 168	118-150-004	150 lt tank, 2 sq.m selective Al collector
A 308	118-300-002	300 lt tank, 2X 2 sq.m selective Al collectors

WARRANTY

Inside packaging of Piccinetti Solare's thermosiphon system, is the WARRANTY document. This document is provided in three copies. The first must be posted to Piccinetti Solare headquarters, the second must be given to the technician and the last one remains to the customer. Please keep the WARRANTY document clean and safe.

The WARRANTY document must be indicated to the technician who will service the thermosiphon system.

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In this document the following symbols will be found:



ATTENTION: for actions that demand particular caution and preparation



FORBIDDEN: for actions that DO NOT HAVE to be executed

GENERAL WARNINGS



If any leakage appears from the tank or the collector, cut off the main electrical supply and contact immediately with your local dealer.



The solar system is protected against freezing by a thermal fluid. Use the thermal fluid that is provided by Piccinetti Solare.



Verify the minimum temperature which can appear in the installation place and fill in the right quantity of thermal fluid (for example -20 C requires 40% propylenglycol to water).



This document is part of the solar system and must be kept in good condition. In case it gets destroyed or lost, contact with your local dealer for replacing it.



The solar system you have just received must be in perfect condition. If you notice a defective material contact with your local dealer



The solar system must be installed by a professional installer. The installer must sign the warranty card.

FUNDAMENTAL RULES OF EMERGENCY



It is forbidden to install the solar system on the tile or flat roof without following the general labor rules.



It is forbidden not to adjust the safety valves and not check for their correct function



It is forbidden to make any change to the solar system, to its components or replace parts of the system without the prior confirmation of Piccinetti Solare.



It is forbidden to through, to allow evaporation, or children to reach the thermal fluid that is not necessary any more.



It is forbidden to intercept or tap the close circuit of the solar system

SYSTEMS DESCRIPTION

The thermosiphon system of A series is a natural circulation system which produces hot water for domestic use. The system contains all the necessary equipment to function. These are:

- The collector (s)
- The solar tank
- The support structure
- The assembly kit

ASSEMBLY KIT COMPOSITION

DESCRIPTION	QUANTITY
Bolt M8X12	4 (8 for two collectors models)
Bolt M10X16	21 (for flat roof support base) 6 (for tile roof support base)
Bolt M10X60	10 (only for tile roof support base)
Nut M10	21 (for flat roof support base) 16 (for tile roof support base)
Closed loop safety valve 3 bar	1
Cold water inlet safety valve 6 bars	1
L shape tank's adapter	2 (only for flat roof support base)
Elbow Ø22 Cu X ¾ male	2
Union Ø22 X 3/4 " female	2
Plug ¾"	2
Plug 1/2 "	1
Elbow 1/2" male X ¾" male	2
Union Ø22 X Ø22	2 (Only for two collectors models)
Connection tube	2
Flat washer M10	25 (for flat roof support base) 18 (for tile roof support base)
Flat washer M8	4 (8 for two collectors models)
Thermal fluid	1 lt
Screw	4
Upat	4
L shape adapters	4 (only for flat roof support base)
Stainless steel supporter for tiles	4 (only for tile roof support base)

Piccinetti Solare thermosiphon systems have a large range of accessories.

ACCESORIES	CODE
Electrical element	200-000-000
Thermostat	200-000-001
Magnesium anode	200-000-002
Heating system exchanger	200-000-003
Thermal fluid	200-000-004

IDENTIFICATION

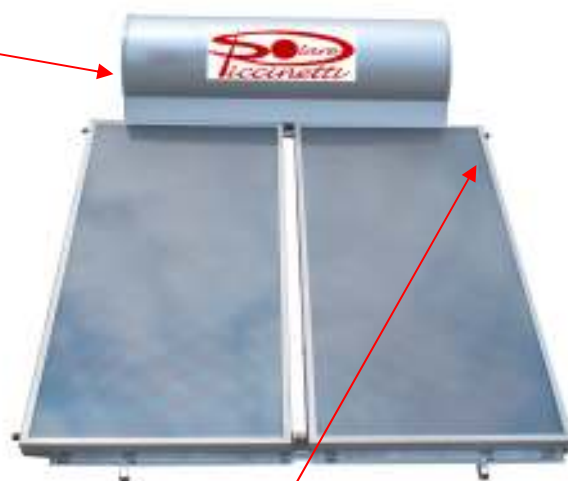
Piccinetti Solare thermosiphon systems are identified by two stickers one of them on the tank and the other on the collector. On these stickers all the details of the system are written. The information provided on the stickers are important for the future identification of the system.



Removing the stickers will make the future identification difficult and will cause problems to the service procedure.

SOLARSPEICHER
SOLAR TANK
BOILER SOLARE
RESERVOIR SOLAIRE
ACUMULADOR SOLAR

Type Type Tipo Type Tipo	<input style="width: 100px; height: 20px;" type="text"/>	Seriennummer Serial number Numero di serie Numero de serie Numero de serie	<input style="width: 100px; height: 20px;" type="text"/>
Artikelnummer Article number Numero dell'articolo Nombre d'article Numero del artículo	<input style="width: 100px; height: 20px;" type="text"/>	Produktionsjahr Production year Anno di produzione Anee de production Año de la producción	<input style="width: 100px; height: 20px;" type="text"/>
Eingangsspannung Input voltage Tensione in ingresso Tension d'entrée Voltaje de entrada	<input style="width: 100px; height: 20px;" type="text"/>		
Leistungsaufnahme Power input Input di alimentazione Puissance fournie Potenza de entrada	<input style="width: 100px; height: 20px;" type="text"/>		
Inhalt Contents Capacità Volume Capacidad	<input style="width: 100px; height: 20px;" type="text"/>		



TYPE		ARIS2000
YEAR OF PRODUCTION		2006
GROSS AREA OF COLLECTOR	2,10 m2	
MAX OPERATION PRESSURE		10 bars
WEIGHT OF COLLECTOR (EMPTY)	40 kgr	
GLAZING FORMAT		FLAT PLATE
ABSORBER INSULATION		ROCK WOOL
FLUID CONTENT		1,22 lt
STAGNATION TEMP		200 C
SERIAL NUMBER		1004206
		MADE IN GREECE

RECEIVING THE PRODUCT

Piccinetti Solare's thermosiphon systems are delivered as follow:

MODEL	TANK	COLLECTOR	SUPPORT BASE	ASSEMBLY KIT
A 168	1	1	1	1
A 308	1	2	1	1

MOVING THE PRODUCT

Piccinetti Solare's thermosiphon system is well packaged in a way that the components will be delivered in good condition.

The packaging of the components should be removed at the place which will be installed.

Before removing the packaging make a final inspection of the system and count the components that were delivered. Make sure that they are according to the table above.



The installer should follow all the safety rules.



Do not stand on the packed components. There is a possibility to cause a serious damage.

INSTALLATION

General directions

Assembly directions

The assembly of the thermosiphon system must be done by a specialized technician. All the components of the solar system are included in the packaging, as described in a previous table.

Before the assembly of the thermosiphon system check:

- a. The good condition of all the components.
- b. The exact position of the system and the right orientation.

In windy or snowy places extra care must be taken for these conditions. For further advice contact the company.

Risk during filling in the thermal fluid



The filling-in procedure must be done in a time that the sun radiation is not very strong.



The thermal fluid must be mixed with water in a specific quantity.



In case of cleaning internally the system with water, take care that no quantity of water remains inside the collector. This will freeze and cause permanent damage. The collector must be always filled in with anti freeze liquid.

ASSEMBLING THE SUPPORT BASE FOR FLAT ROOF



The L shape adapters are used to tighten and safe the tank on the support base.



The hot mix tube of the collector (s) will pass from the hole that is placed at the back of the tank's supporter, as in photo.



Place the L shape supporter as in photo. Notice that the oval hole is used to support the collector



The collector's Π supporters are adapted to the tank's supporters with two bolts and nuts.



In the same way the collector's L supporters are fixed on the top of the support base to hold the collector

ASSEMBLING THE SUPPORT BASE FOR TILE ROOF

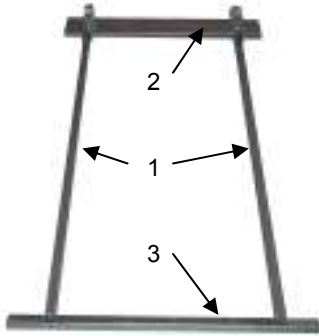
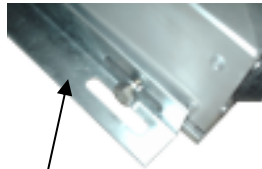


Photo 1



4 Photo 3



Photo 5



Photo 7

The support base for tile roof, includes :


1. Long supporters X 2
2. Wide supporter X 1
3. Narrow supporter X1
4. Collector's supporter X 2
5. Stainless steel supporters for tiles X 4

Before starting the assembly, the stainless steel supporter for tiles must be passed through the tiles and fastened on the wooden structure.

The other edge of the stainless steel supporter for tiles must be out of the tile roof ready to fasten the support base of the solar water heater. They are adapted on each side of the narrow and wide supporters as in photo 2.

Each long supporter is extended in order to have its final length by using the short supporters. Each long and short supporter are tightened together with 2 bolts and nuts.

Fasten the wide supporter with the two long supporters using 4 bolts M10X 40. Do the same with the narrow supporter.

 Do not screw tight the narrow supporter.

Adapt the collector supporters on the collectors as in photo 3, using the 4 bolts M8X12.

Place the collector on the structure as in photos 4 and 5.

Center the collector (s) and screw tight all the bolts.

Place the tank on the support base as in photo 6.


 Screw tight the bolts of the tank as in photo 7



Photo 2



Photo 4



Photo 6



Photo 1

Inside the support base's carton box there are all the necessary components to connect the solar system.

The 6 bars safety valve is connected to the "COLD WATER INLET". This tube is indicated by a blue ring.

To connect the collector with the tank it needs the two inox flexible tubes (photo 1).

The short tube is used to connect the up-right tube of the collector with the "COLLECTORS INLET" which is indicated by a red plastic ring (Photo 2).

The tube should pass through the solar tanks hole (Photo 3).

The second tube (long) is used to connect the down-left tube of the collector with the "COLLECTORS OUTLET" which is indicated by a blue plastic ring (Photo 4).

To the rest of the collector's tubes adapt the brass connectors with the plugs.

ATTENTION: For two collectors models, the two collectors must be connected together with the Ø22 X Ø22 unions.

The "HOT WATER OUTLET" is connected to the house consumption.



Photo 2



Photo 3



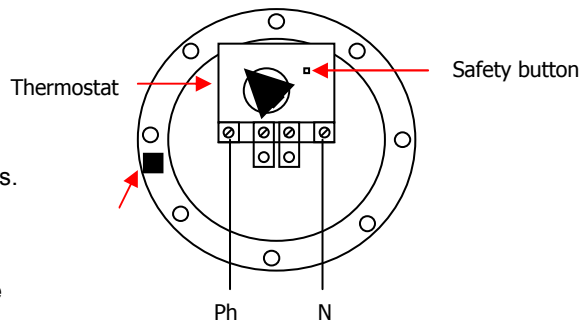
Photo 4



ELECTRICAL ELEMENT

Piccinetti Solare's thermosiphon solar systems are available with an electrical element. The electrical element is placed at the side of the solar tank, in a special place protected against weather conditions. In order to connect the electrical element :

- Unscrew and remove the external cover from the solar tank.
- In models that the electrical element is not standard, the tap should be removed and adapt the electrical resistance.
- Set the thermostat at the desired temperature.



A certified electrician must do all electrical connections. All the connections should be done according to the following diagram.



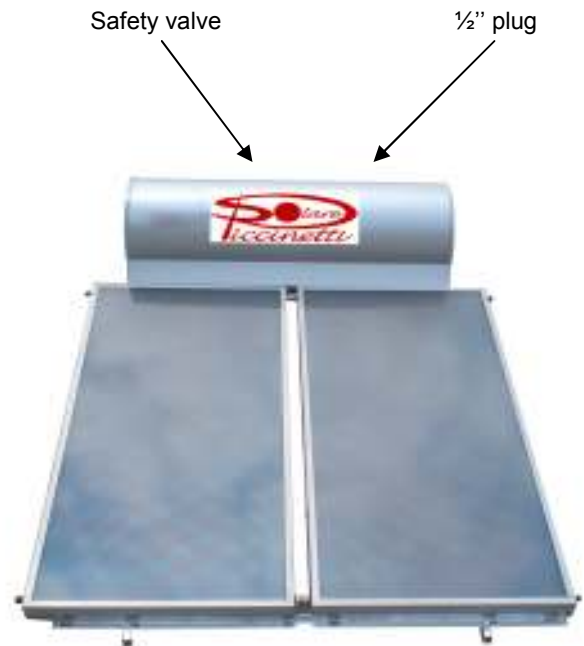
ATTENTION: The connection must be done on the thermostat - **NOT** directly on the resistance by bypassing the thermostat.



The electrical resistance must be connected to the electrical main, via a dual pole cut-off switch. The distance that separates the connections must be AT LEAST 3mm wide.

FILL-IN THE SYSTEM

At the upper part of the tank, there are two openings. One of them is for filling-in the thermal liquid and the other is the exit of the air during the fill-in procedure. In one of them adapt the safety valve and to the other a plug.



INSTALLATION

THERMAL FLUID

Before using the system it is very important to do the following actions.

TEST AND FINAL CHECK

Check all the pipes of the system for their right positioning and that everything seems correct. Check that the brass fittings and the connectors are tightened.

THERMAL FLUID

The system is equipped with one liter of PROPYLENE GLYCOL 1,2 . This thermal fluid is used to protect the system against freezing.

The thermal fluid must be mixed with water in a percentage that is necessary to protect the system.



The system must be always full of thermal fluid. The percentage of it should be:

PERCENTAGE %	TEMPERATURE C
5	-2
10	-4
15	-5
25	-10
30	-14
35	-17
40	-22
50	-32
60	-49
80	-57



This thermal fluid is for solar applications. All of its characteristics are indicated for this purpose.



The thermal fluid is non-toxic liquid.



Do not use any automatic fill-in system.



The connection tubes must be well-isolated.



The filling-in of the system must be very slow in order to allow the air to be removed from the closed loop.



The closed loop must not be under pressure.

BEFORE USING THE SYSTEM

Before using the system make a final check.





Open all the valves and check for any kind of leakage. Repeat the inspection after 30 minutes.



If any leakage appears contact the installer immediately.

MAINTENANCE

Once installed the solar water heater is functioning properly without any further action from your side. You just enjoy the hot water that the Piccinetti Solare solar water heater is providing you.

-  When you do not use the solar water heater, during the summer period, cover the collector (s) with a non-transparent cover.
-  A normal solar water heater must be serviced every year (the first service after 2 years). Attend to your local authorized dealer.
-  Inspect the glasses of the heater, periodically. Clean them if there is dust on them. This will keep the efficiency of the system at high levels.
-  Any maintenance action executed by a non qualified person it is prohibited.

CHECK

To complete the installation, please check the following actions:

DESCRIPTION	OK
Collector's circuit	
Verification of safety valves	
Verification of connection tubes	
Verification of any kind of leakage	
Verification of the electrical connection	
Verification of the stability of the support base	
Verification that all the bolts and nuts are tightly screwed.	

TROUBLESHOOTING

PROBLEM DESCRIPTION	CAUSE	ACTION
Low efficiency of the system	Low quantity of thermal fluid	Fill-in thermal fluid
	Leakage from the connection tubes	Tight the connectors
	Dirty glass covers	Clean the glass covers
Leakage from the 6 bars safety valve	High main pressure	Install a pressure reducer



Piccinetti Solare is constantly engaged in the continuous improvement of the quality and the aesthetics of its products therefore there can be subject to variation on technical data, accessories and equipment.