



# LOWENERGIE™

Quality Energy Saving Products



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## **IMPORTANT**

Before installing this product, read and follow all warning notices and instructions accompanying this product.

Failure to follow safety warnings and instructions can result in injury, death, or property damage.

**Please retain this instruction manual for future reference**

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## **SAFETY WARNINGS & INSTRUCTIONS**

**Read and follow all instructions in this manual and on the equipment.**

**Failure to do so could result in severe or fatal injury.**

**WARNING:** This heater 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 heater by a person responsible for their safety.

**WARNING:** Solar heater (particularly the panel) can be **VERY HOT** after exposing to the sunshine for hours and water inside is not moving.

**CAUTION:** The solar heater must be positioned so as to prevent it being used as means of access to the pool by young children.

**CAUTION:** Never stand or sit or put any object on the main base and dome cover.

**WARNING:** Improper assembly of the equipment may cause severe injury.

**WARNING:** NEVER allow children to operate the solar heater.

**WARNING: Hazardous Pressure.** To avoid explosion and possible severe or fatal injury, the solar heater operating pressure must not exceed 1.5bar (21psi).

**CAUTION:** Remove any pool return inlet water features like water fountain, water fall and spa etc which possibly reduce the flow rate and then create the pressure inside the solar heater which may damage the unit.

**WARNING:** Pool pump or filtration flow rate should not be higher than 10000 litres/hr (10m<sup>3</sup>/hr).

**WARNING:** Turn off the pump before installation and disconnecting the solar heater from your filtration system.

**CAUTION:** DO NOT put any weight on the solar heater.

**CAUTION:** DO NOT jump, step, or walk on the solar heater.

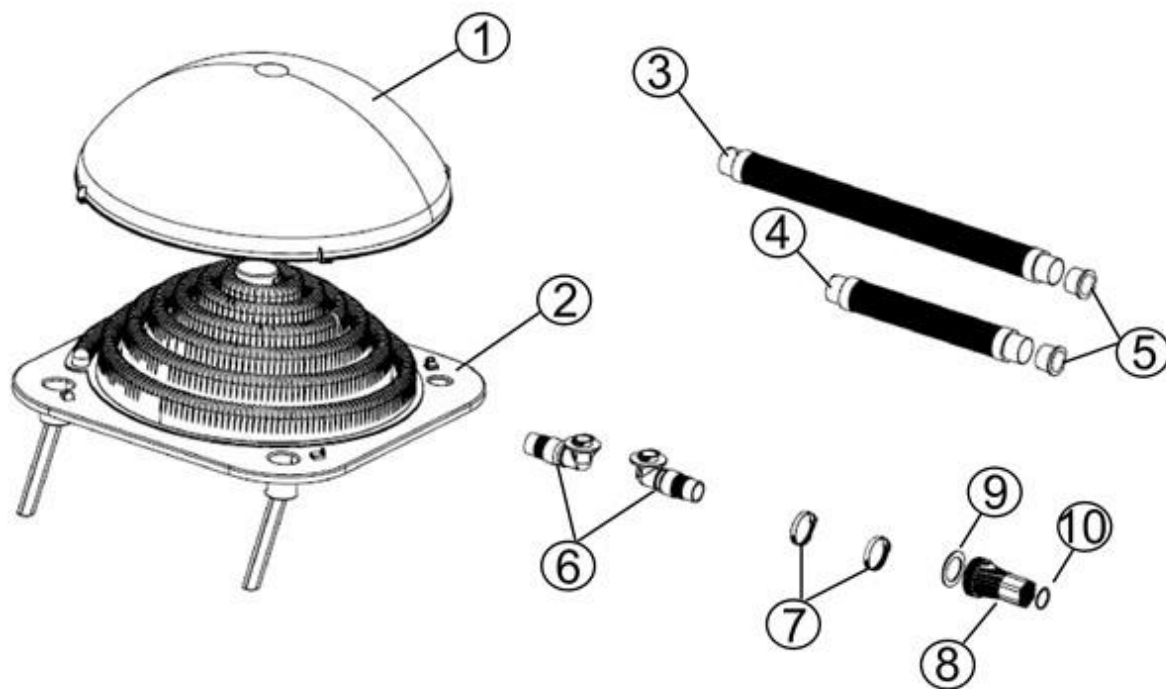
**CAUTION:** Never place any pool chemicals close to the solar heater as chemical fumes and/or spills can cause severe corrosive attack to its panel and accessories.

**CAUTION:** DO NOT apply any petroleum-based lubricant which may damage the product.

**CAUTION:** If using chlorinator, make sure it is placed after the solar heater. Otherwise, chlorine may damage the unit.

**Above warnings and cautions are not intended to incorporate all possible instances for risks and / or severe injury. Pool owners should always exercise intensive caution and common sense when utilizing their pool and operating the equipment.**

## Box Contents



No.	Part Name	Qty
1	Dome Cover	1
2	Main Base	1
3	Long Hose - Ø38mm (1 1/2")	1
4	Short hose - Ø38mm (1 1/2")	1
5	Hose Reducer- Ø32mm (1 1/4") –Ø 38mm (1 1/2")	2
6	Hose Connector	2
7	Hose Clamp	2
8	Threaded nut hose connector	1
9	Flat Gasket (for threaded nut hose connector)	1
10	O Ring (for threaded nut hose connector)	1

## **General Information**

This solar heater features an innovative dome design that provides a better heat transfer than traditional solar heating systems, and also eliminates the need to set aside additional space for conventional heating panels.

With the hose connectors provided, this solar heater fits filtration systems which require either Ø32mm (1 1/4in) / 38mm (1 1/2in) soft hose connection or Ø57mm (2 1/4in) threaded nut hose connection.

## **How It Works**

The solar heater dome should be installed between the pump/filter and return inlet of the pool. Cold water flows from the pool water outlet to the pump/filter and through the solar heater. Water is heated while flowing through the heater coils, and then back to the return inlet of the pool.

## **Points to Note:**

### **1) Installation**

Before installation, make sure you have filled your above-ground pool with water, and it is connected with necessary filtration hoses which are connected with the filter and pump.

The solar heater will become very heavy after filling with water. Select a proper site for the solar heater before installation. The solar heater should be installed lower than the pool water level, on a completely level, very firm ground or equivalent. The solar heater should face in a **SOUTHERLY** direction and its stand should be used for an optimal solar angle.

**WARNING:** Turn off the pump before installation and disconnecting the solar heater from your filtration system.

**WARNING:** Never place the solar heater close to any pool chemicals as chemical fumes and/or spills can cause severe corrosive attack.

**CAUTION :** The solar heater must be positioned so as to prevent it being used as means of access to the pool by young children.

**CAUTION:** Never stand or sit or put any object on the main base and dome cover.

### **2) Solar heater operating pressure**

Make sure that the solar heater operating pressure must not exceed 1.5bar (21psi). It is recommended to have a pressure gage installed before the solar heater after the pump/filter to monitor the water pressure going inside the solar heater.

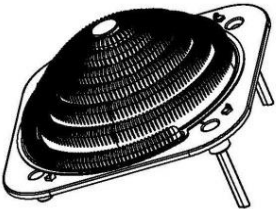
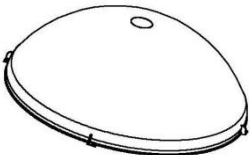
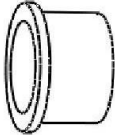

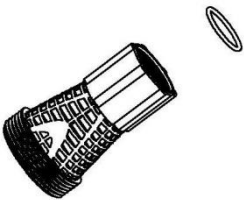
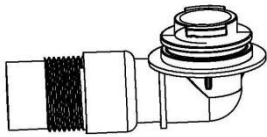


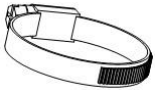
### 3) Linking additional solar heaters

Never install additional solar heaters when filtration/pump is under operation. Always turn off the pump before heater installation or disconnection.

## Solar Heater Installation

Before installing solar heater, check to make sure all parts are present in the package.

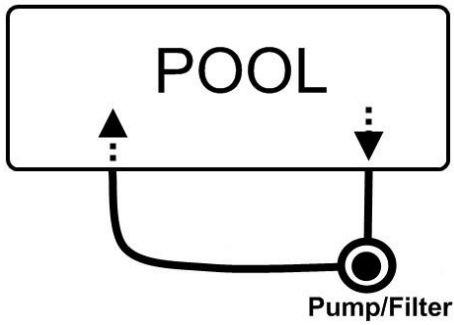
### Primary Component

<p><b>1 x Main base with 2 stands</b></p> 	<p><b>1 x Heater Dome Cover</b></p> 	<p><b>2 x Hose reducer</b> Ø32mm(11/4in)–Ø38mm (1 1/2in)</p> 
<p><b>1 x Flat gasket</b> (for connection of Threaded Nut Hose connector to Threaded Nut hose.)</p> 	<p><b>1 x Threaded nut hose connector</b> (preinstalled with O ring inside)</p> 	<p><b>2 x 32mm (1 1/4in) Hose connector</b> (preinstalled on the water outlet/inlet under the main base)</p> 
<p><b>1 x Long hose (Ø38mm / 1 1/2in)</b> (for connection to filter/pump)</p> 	<p><b>1 x Short hose (Ø38mm / 1 1/2in)</b> (for connection to another heater)</p> 	<p><b>2 x Hose clamp</b></p> 

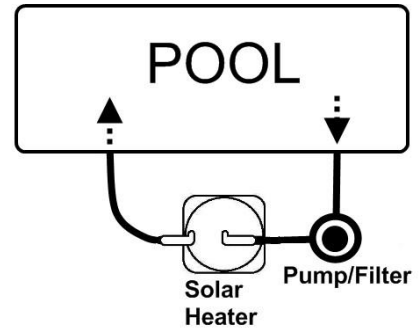
The only tool you need is a screwdriver with which to secure the hose clamp for hose connections to the hose connectors.

## Pool layout with Solar Heater

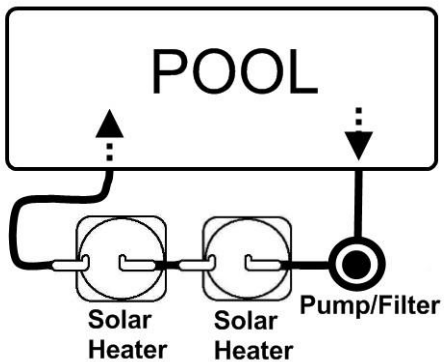
Typical above-ground pool layout



With one Solar Heater



With multiple Solar Heaters



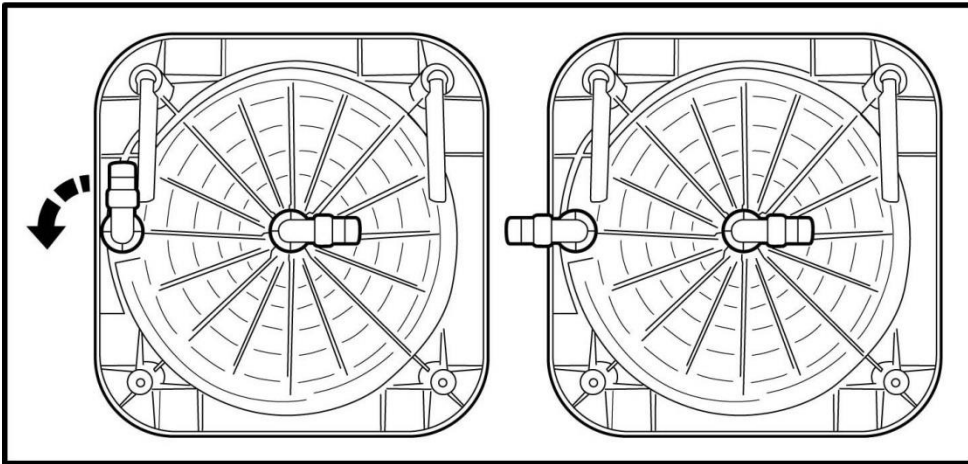
Under the main base, there are two holes for hose connector assembly; one is located in the center and another one is on the side. Water flows in the heater coils from the center hose connector and then out through the side hose connector back to the pool.

Longer hose is provided for the connection of the heater to the pump/filter, and short hose is provided for connection of additional heater as shown. If the length of hoses provided does not fit your pools, you can use another soft hose with same diameter.

## Hose Connectors on the main base

Two hose connectors are preinstalled on the bottom of the main base. Center hose connector is for hose connection to the pump/filter. Side hose connector is for hose connection to the pool return or additional solar heater.

Before connecting to the hose, turn the side hose connector anticlockwise as shown until it stops. The openings of 2 hose connectors should point in opposite directions.



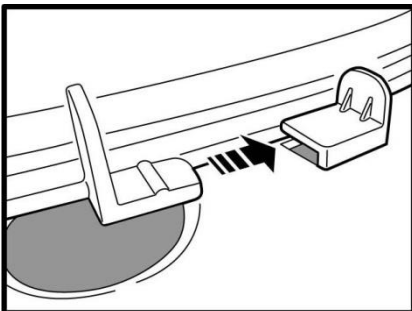
To detach the hose connectors from the main base, turn the connectors clockwise until it stops and then pull it away.

To assemble the hose connector to the main base, reverse the steps to finish the assembly.

## Assembling Dome Cover to Main Base

**NOTE:** Start this assembly after finishing all hose connections.

There are 4 tabs on dome cover and 4 slots on the solar heater base. Push the tab into the slot to secure the dome cover on the heater base.



**CAUTION:** Do not hold the dome cover to move the whole unit.

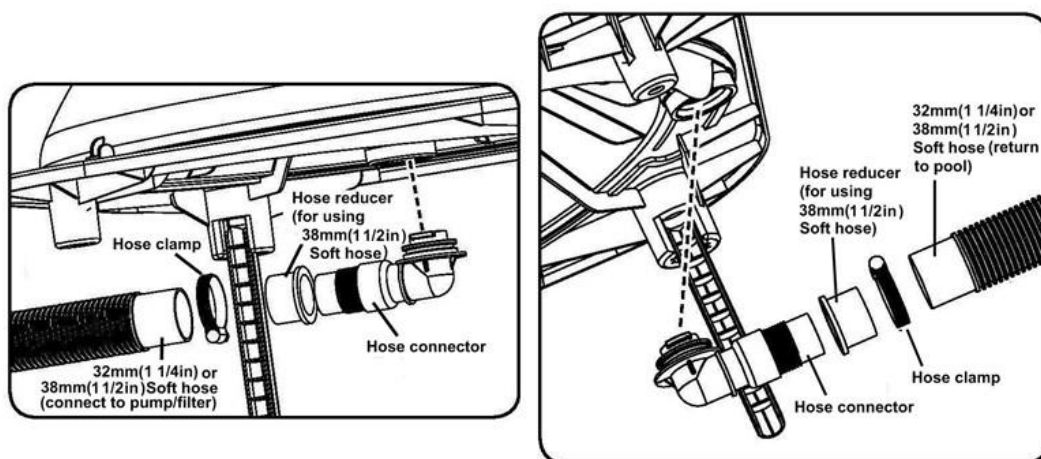
## Connecting the Solar Heater to the pool

**CAUTION:** Before beginning to connect this solar heater to your pool, make sure your pool water outlet and return inlet are closed and already connected with hoses. Refer to your pool manual or consult your pool dealer for proper instructions.

**CAUTION:** Turn off the pump before following installation

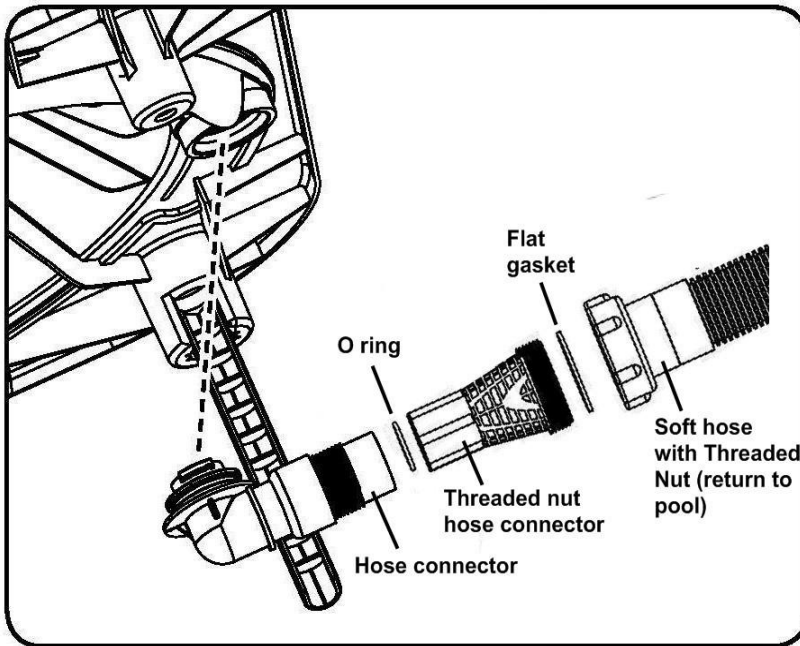
### 1) For pools using hose connection of Dia. 32mm (1 1/4in) / 38mm (1 1/2in) Soft Hose

- a) Detach the pool return hose from your pump/filter.
- b) For soft hose of  $\text{Ø}32\text{mm}$  (1 1/4in), directly slide the hose to the hose connectors as far it can go. Use the hose clamp to secure the hose connection.
- c) For soft hose of  $\text{Ø}38\text{mm}$  (1 1/2in), use either long hose provided or another soft hose in same diameter to connect the pump/filter and middle hose connector. Firstly, insert the hose reducer inside of cuff of long hose and slide it onto the hose connector as far as it can go. Use hose clamp to secure the hose.



### 2) For pools using hose connection of Dia. 57mm (2 1/4in) soft hose with Threaded Nut

- a) Detach the pool return hose from your pump/filter.
- b) Use soft hose of either  $\text{Ø}32\text{mm}$  (1 1/4in) or  $\text{Ø}38\text{mm}$  (1 1/2in) or to connect the center hose connector to the pump/filter. Make sure the hose is secured by the hose clamp.
- c) Screw the threaded nut hose connector to the side hose connector. Make sure the O ring is inside the threaded nut hose connector.
- d) Screw the threaded nut of the hose, which is connected to the pool return inlet, to the threaded nut hose connector. Make sure the flat gasket is placed between threaded nut hose connector and hose threaded nut.

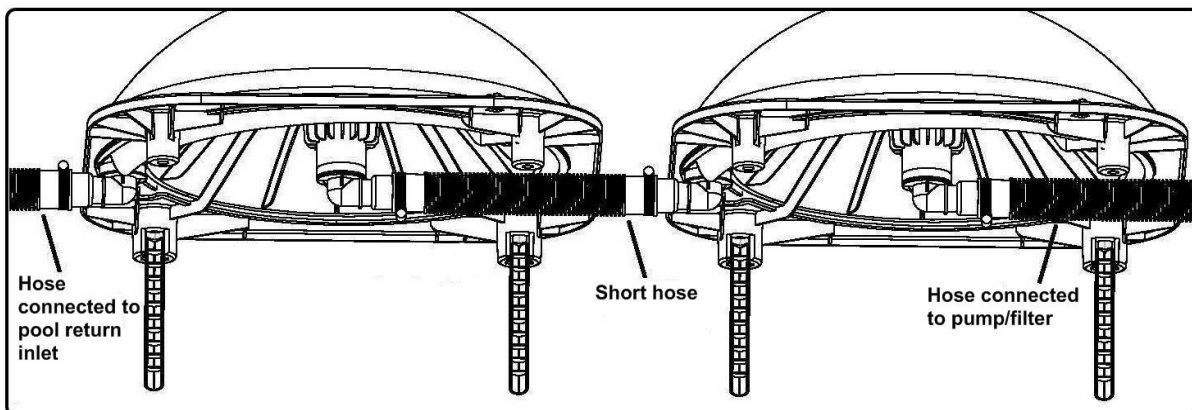


### 3) For multiple Solar Heaters

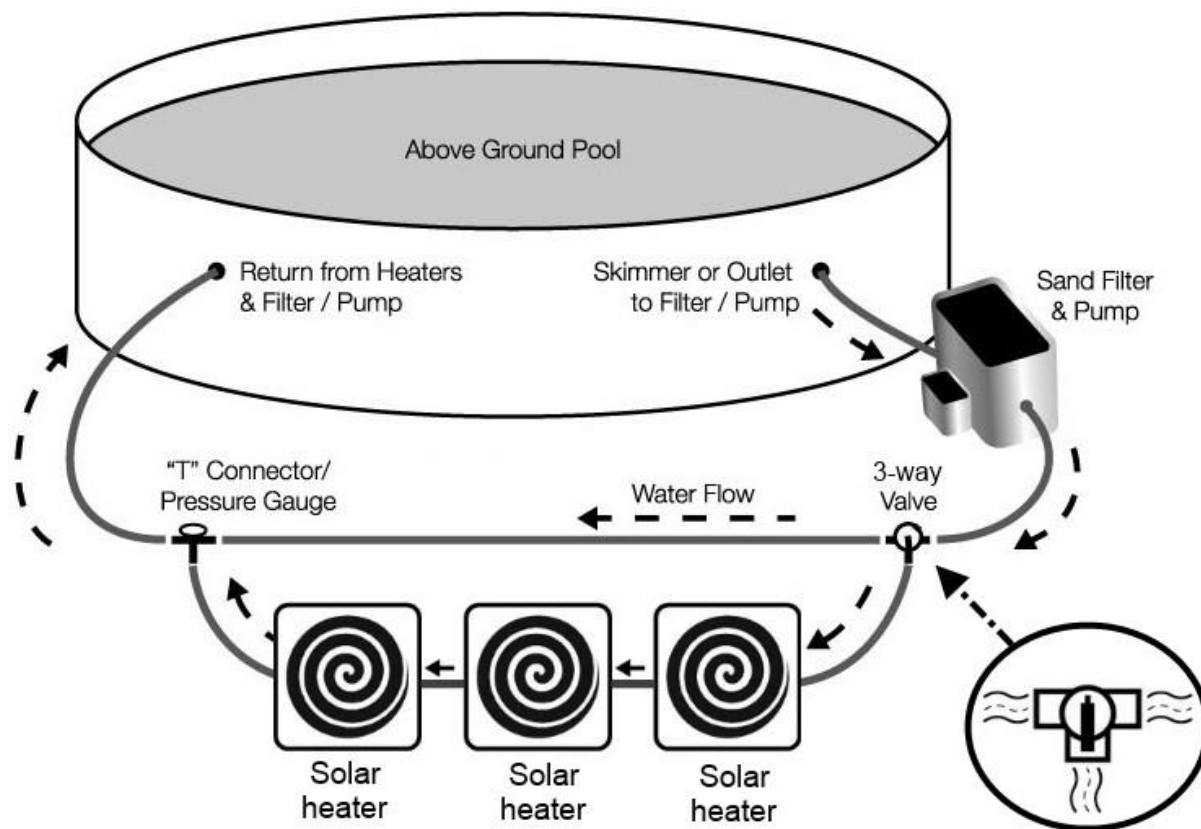
Depending on the weather conditions, 1 heater is recommended per 10,000 litres of pool volume.

**NOTE:** Make sure to have enough hose clamps and hose reducers before linking additional solar heaters. A hose reducer is required for Ø38mm (1 1/2" in) hose connection, and a hose clamp should be used to secure all hose connections.

For one additional solar heater, use short hose provided and hose reducer to connect the additional solar heater.



For connection of 3 or more heaters, it requires a 3-way valve (not included) and “T” connector (not included) to be installed. Below is an example of above ground pool with 3-way valve set up in place.



**ATTENTION:** Make sure to completely open the valve (3 holes) in operation.

## Initial Operation

Before turning on your pump, make sure all hose connections are secured and hoses are not kinked or bent at severe angle before operation.

Make sure to unblock pool water outlet and inlet to let water flows into the hoses.

### TIPS:

It is recommended to place a pool solar cover on at night to prevent heat loss.

## **Winterising and Maintenance**

**WARNING:** ALWAYS turn off the pump before disconnecting the heater/hoses from your filtration system.

For winterising, block the pool water inlet and outlet and then disconnect the solar heater from the hoses.

Drain all the water out of the solar heater at the end of the season. Any water left inside may freeze, causing the material to rupture as the ice expands.

Detach the hose connectors and close the two holes under the main base to prevent insects from making a winter home inside.

To protect the solar coils, always put the dome cover on for storage.

Retract the stands and store the solar heater in a place protected from frost.

Do not put any object on the solar heater and its dome cover.

Always store the solar heater out of reach of children.

## Trouble Shooting

Problem	Possibilities /Solution
Does not heat up the water	<ul style="list-style-type: none"> <li>• Make sure the filtration system works to circulate the water.</li> <li>• Sunshine is not strong enough.</li> <li>• Additional solar heaters may be required.</li> <li>• Put pool solar cover on at night to prevent heat loss.</li> <li>• Put pool solar cover on when using the solar heater to increase the heating efficiency.</li> </ul>
Solar heater is leaking	<ul style="list-style-type: none"> <li>• Check leakage on connector seal and any damage on unit. Tighten the hose / hose connector connection. Always use a hose clamp. Replace a new solar heater if it is damaged.</li> </ul>
Bubble continues to flow out to pool or bubble always inside the hose in operation	<ul style="list-style-type: none"> <li>• Make sure the water level in the pool is over the water outlet.</li> <li>• Check if flow rate becomes weak because pump / filter is clogged with debris. Clean the filter or pre-filter in the pump regularly.</li> <li>• Check if hose is clogged. Try to purge out the clog.</li> <li>• Check if hose is damaged. Replace a new one if necessary.</li> </ul>

**Please retain this instruction manual for future reference**

### **Guarantee**

This solar heating dome is guaranteed for a period of 1 year from date of purchase.



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