

# EZSUN

**portable pool solar heating**

## **INSTALLATION AND OPERATION MANUAL**



**Read all instructions before assembling or using the SunHeater system.  
Retain this manual for future use.**

# EZ SUN HEATER TABLE OF CONTENTS

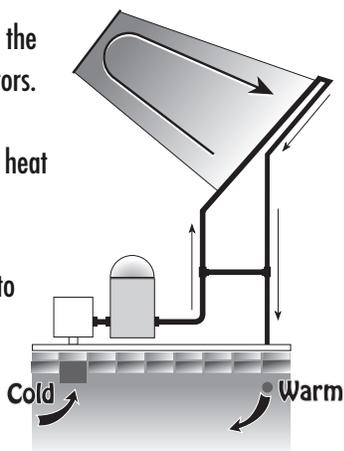
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## IMPORTANT SAFETY INFORMATION

-  **CAUTION:** Please read this manual carefully and thoroughly. Improper installation or failure to comply with the guidelines of this manual may damage the product and will void the warranty.
-  **CAUTION:** It is advised to consult with a professional when installing the SunHeater on a roof, fence or rack system. When installing the collectors near the pool, especially on an elevated rack system, ensure that the structure does not provide access to the pool.
-  **CAUTION:** Installing the collectors over grass will cause damage to the lawn.
-  **CAUTION:** Do not walk on the collectors.
-  **CAUTION:** Turn off all pool equipment prior to installation.
-  **CAUTION:** Only use SunHeater mounting equipment when installing collectors on a roof, fence or rack system.
-  **CAUTION:** Wear and tear components (connector hoses, strapping, clamps, plastic fittings and hardware) should be inspected regularly to ensure they are in working condition. These components are not covered by warranty.

# HOW YOUR EZ SUN HEATER WORKS

- The pool pump circulates the water through the collectors.
- The collectors absorb the heat from the sun.
- Warm water is returned to the pool.



SUNHEATER collectors have a web construction designed for maximum heat absorption regardless of the position of the sun.

## SIZING GUIDES

ABOVEGROUND POOLS			
Round	Oval	S120U	S240U
Up to 24'	Up to 15' x 30'	1 Box	1 Box*
Up to 33'	Up to 21' x 41'	2 Boxes	1 Box

\*The S240U can be used but only a S140U is required.

INGROUND POOLS			
Dimensions	S120U	S240U	Kits
Up to 15' x 30'	4 Boxes	2 Boxes	1 SK22U
Up to 16' x 36'	6 Boxes	3 Boxes	1 SK22U
Up to 20' x 40'	8 Boxes	4 Boxes	1 SK22U

Use Sunheater Liquid Heatshield to hold in heat at night and during cool weather. See [www.sunheater.com](http://www.sunheater.com).

## LIST OF COMPONENTS

S120U		
Item	Description	Qty
A	1.5" Stainless Steel Hose Clamp	2
A	1.25" Stainless Steel Hose Clamp	2
B	3.75" Rubber Hose Connector	1
C	PVC Elbow Connector	2
D	PVC End Cap	2
E	Teflon Tape	1

S240 U		
Item	Description	Qty
A	1.5" Stainless Steel Hose Clamp	4
A	1.25" Stainless Steel Hose Clamp	2
B	3.75" Rubber Hose Connector	2
C	PVC Elbow Connector	2
D	PVC End Cap	4
E	Teflon Tape	1



A



B



C



D



E

Note: An extra rubber hose has been supplied to connect additional SunHeater systems.

## INSTALLATION

READ THE ENTIRE MANUAL PRIOR TO THE INSTALLATION AND USE OF THE SUNHEATER SYSTEM.

### TOOLS REQUIRED

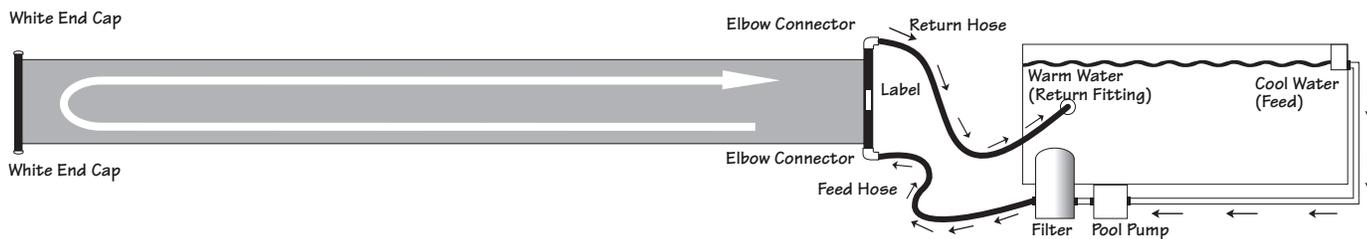
- Flathead screwdriver or 5/16" (8mm) nut driver
- Plug for return fitting
- For roof or rack mounting:
  - o Power drill
  - o 1/8" (3mm) drill bit
  - o #2 Phillips head drill bit
  - o Silicone sealant (GEI or equivalent)

### GUIDELINES FOR POSITIONING THE COLLECTOR

- The collector(s) needs at least 6 hours of full sunlight daily.
- For ground installation, ensure the area is free of sharp objects prior to installation.
- A 1hp pump will handle installations up to 30ft from the pool equipment and a height of 1 story.
- The collector(s) can be installed on the ground, a roof, a rack or a fence. Additional plumbing and hardware kits may be required (not included).

# S120U INSTALLATION

This layout is for a single collector installed near the pool filter equipment. Installing the collector on a roof, rack or fence may require additional plumbing and hardware kits.



- 1) Ensure there is adequate work space to unroll the 20' collector.
- 2) Remove the collector from the box and the strap from around the collector. Slowly uncoil the panel.

**Note:** Laying the collector in the reverse direction of the coils will help flatten the panel.

- 3) Remove and discard the black protective caps covering the threaded portion of the headers.
- 4) Wrap the threaded ends of the headers with the provided Teflon tape to ensure a watertight seal.



- 5) Locate the header that does not have the white serial number label and install the PVC end caps on either end of that header.



- 6) Locate the header with the white serial number label and install the PVC elbow connectors on either end of that header.



- 7) Turn the pool pump off and ensure the handle of the filter is in the OFF/CLOSED position.



- 8) Plug the return fitting to prevent water loss.



- 9) Remove the flex hose from the return fitting of the pool and secure it to the lower PVC elbow connector using a stainless steel clamp.



- 10) Secure another flex hose (not included) to the top PVC elbow and return fitting of the pool using the stainless steel hose clamps following the above system layout.

The collector is now installed and ready to use. Ensure that all fittings are secure.

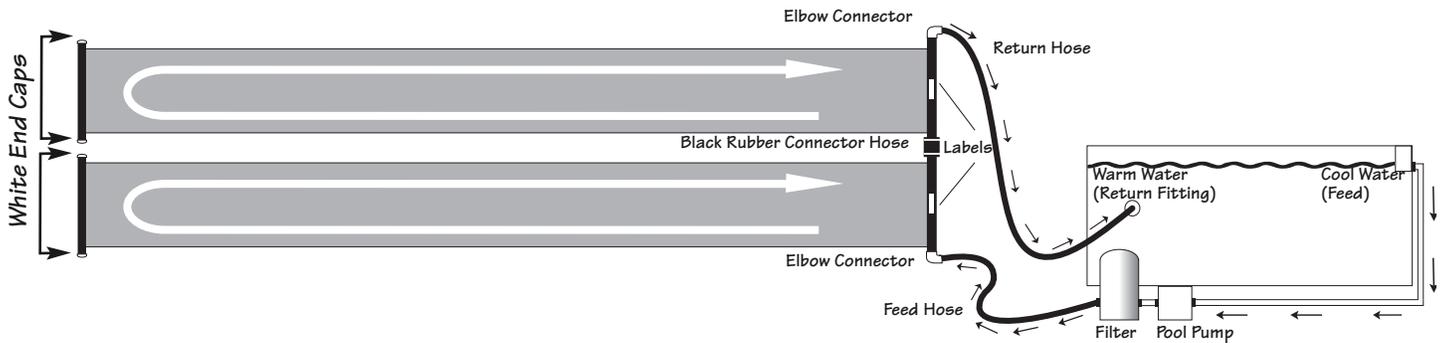
- 11) Remove the plug from return fitting and turn the handle of the filter to the FILTER position.

- 12) Turn the pool pump to the ON position.

**Note:** Air bubbles may come through the return line during initial start-up of the collector. This is normal and will stop after all the air has been purged from the solar heating system.

# S240U OR MULTI-SYSTEM INSTALLATION

This layout is for system of 2 or more collectors installed near the pool filter equipment. Installing the collector on a roof, rack or fence may require additional plumbing and hardware kits.



- 1) Ensure there is adequate work space to unroll the 20' collectors.
- 2) Remove the collectors from the box and the strap from around the collectors. Slowly uncoil the panels.

**Note:** Laying the collectors in the reverse direction of the coils will help flatten the panels.

- 3) Remove and discard the black protective caps covering the threaded portion of the headers.

- 4) Join the headers with the white labels together using a rubber hose connector and two 1 1/2" hose clamps. Position the hose clamps 1/2" in from each end of rubber connector hose and tightens.



- 5) Locate the header that does not have the white serial number label and install the PVC end caps on either end of that header.



- 6) Locate the header with the white serial number label and install the PVC elbow connectors on either end of that header.



- 7) Turn the pool pump off and ensure the handle of the filter is in the OFF/CLOSED position.



- 8) Plug the return fitting to prevent water loss.



- 9) Remove the flex hose from the return fitting of the pool and secure it to the lower PVC elbow connector using a stainless steel clamp.



- 10) Secure another flex hose (not included) to the top PVC elbow and return fitting of the pool using the stainless steel hose clamps following the above system layout.

The collector is now installed and ready to use. Ensure that all fittings are secure.

- 11) Remove the plug from return fitting and turn the handle of the filter to the FILTER position.

- 12) Turn the pool pump to the ON position.

**Note:** Air bubbles may come through the return line during initial start-up of the collector. This is normal and will stop after all the air has been purged from the solar heating system.

# ROOF/RACK/FENCE INSTALLATION

**Note:** The mounting hardware is sold separately. See page X for available kit options.

## Setup and Positioning

- Allow the collectors to lay in the sun for 30 minutes to relax the material and flatten the panels.
- Ensure there is at least 1' around all sides of the collector(s) for adequate space for connectors and plumbing.
- Install the collectors on a slight angle toward and end cap for draining and winterization.
- The panels can be placed on either side of a roof vent up to 3" in diameter.
- Ensure the collectors will have at least 6 hours of direct sun exposure.

## Installation

**Note:** Below instructions are for mounting purposes only. For full collector installation, please see the appropriate system layout provided in this manual.

- 1) Once positioning is established, locate the manufactured slot slots in a 20' collector).
- 2) Place the bracket in place and pre-drill a 1/8" pilot hole for the screw.
- 3) Insert the screw using a Phillips head screwdriver to hold the bracket in place (as shown).



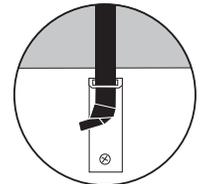
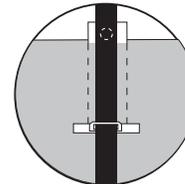
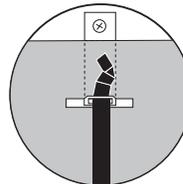
**Important:** If installing on a roof, use a silicone sealant to prevent water leakage into structure. Apply adequate amounts of sealant to both the pre-drilled hole and over the screw head on

- 4) Install a bracket on the bottom side of the panel (as shown), ensuring that the bottom bracket is in line with the top bracket.



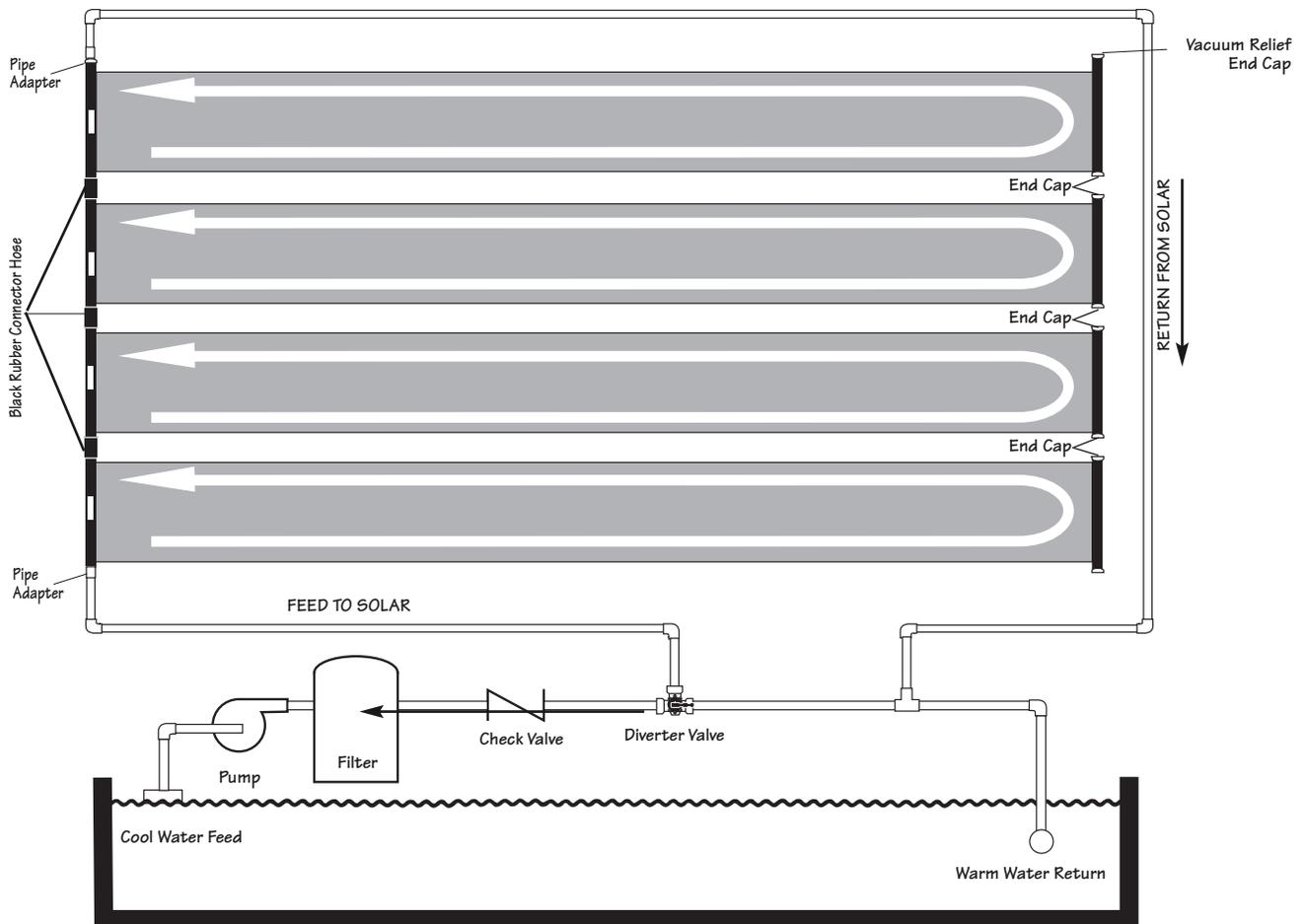
**Note:** (15) brackets are provided with each kit, which will support up to (2) 2'x20' collectors. (10) brackets are used for the top end of each 2' panel and (5) are used for the bottom of the second 2' collector.

- 5) Once all brackets are installed, use the provided strapping to hold the collectors in place. Tie a knot in the top bracket and feed the strap through the middle bracket before tying the strap the bottom bracket (as shown).



# HARD PLUMB SYSTEM LAYOUT

**Note:** The SK22U (not included) is required for the following installation. See page 7 for available kit options.



# WINTERIZATION

**YOUR SOLAR SYSTEM MUST BE DRAINED FOR WINTERIZATION! FREEZE DAMAGE IS NOT COVERED UNDER WARRANTY! YOU MUST DRAIN YOUR SOLAR COLLECTORS JUST LIKE YOU DRAIN THE REST OF YOUR POOL EQUIPMENT!**

Remove the vacuum relief valve at the top of the solar system. Remove the rubber end cap at the bottom and be sure ALL the water is drained out of the system. Replace end caps and blow pressurized air in the reverse direction of normal water flow. This is the most effective way to drain your system. You can leave the collectors in place (as long as they are completely drained) and they will withstand even the harshest winters. SPQ Brands recommends that you store your collectors inside in a warm dry place.

## COLLECTOR REPAIR

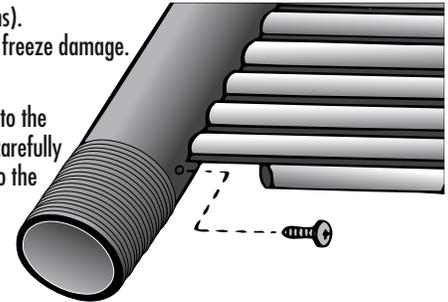
### IF A COLLECTOR DEVELOPS A LEAK

Your solar collectors are warranted against defects in materials and workmanship (see warranty for details and limitations). If a leak develops for any other reason, you may use the repair method shown. The collectors are not warranted against freeze damage.

### SOLAR COLLECTOR REPAIR

This method allows for an easy and permanent, on-site repair of a collector by isolating the leading riser tube. Referring to the figure at the right, locate the tube to be isolated. (End tube has been shown for clarity). Using a sharp utility knife, very carefully cut away approximately 1" (2.54 cm) of the tube at both headers. Drive a #10 sheet metal screw, preferably stainless, into the hole in the header. The screw must be between 1/2" (1.27 cm) and 3/4" (1.9 cm) long. **DO NOT OVER-TIGHTEN!**

If the screw strips out, or if the repair leaks, use a #12 screw. This repair method will not void the collector warranty.



With proper care and winterization, you will enjoy your solar collectors for many years.

## AVAILABLE KIT OPTIONS

SK22: HARD PLUMB SYSTEM KIT	
Kit Components	Qty
1.5" Diverter Valve	1
3.75" Rubber Hose Connector	1
Pipe Adaptor	2
End Cap	1
Vacuum Relief Valve	1
Spring Check Valve	1
1.5" Stainless Steel Clamps	3
<ul style="list-style-type: none"> <li>• Used for hard plumb installation</li> <li>• Will support up to (8) S140U systems or (4) S240U</li> </ul>	

SK35: MANUAL DIVERTER VALVE KIT	
Kit Components	Qty
1.5" Ball Valve	1
1.5" PVC Tees	2
Flex Hose Adaptors	4
<ul style="list-style-type: none"> <li>• Used for flex hose installations.</li> <li>• Will support S140U and S240U systems.</li> </ul>	

SK43: MOUNTING KIT	
Kit Components	Qty
6' Web Strapping	5
Stainless Steel Mounting Brackets	15
#14 Stainless Steel Screws	15
<ul style="list-style-type: none"> <li>• Used for mounting on roof, rack or fence.</li> <li>• Will support up to (2) S140U or (1) S240U system(s).</li> </ul>	

SK34: HIGH WIND ADD-ON MOUNTING KIT	
Kit Components	Qty
6' Web Strapping	4
Stainless Steel Mounting Brackets	4
#14 Stainless Steel Screws	4
<ul style="list-style-type: none"> <li>• Used in conjunction with SK43 in areas of excessive wind.</li> <li>• Will support (1) 2' x 20' collector.</li> </ul>	

