

# SunGrabber™

## ABOVE GROUND - SOLAR POOL HEATER -



## INSTALLATION AND OPERATION MANUAL

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**ATTENTION:** THIS MANUAL PROVIDES A DETAILED STEP-BY-STEP PROCEDURE FOR THE INSTALLATION OF THE SUNGRABBER™ SOLAR POOL HEATING SYSTEM. THE DIRECTIONS SHOULD BE FOLLOWED PROPERLY AND ONLY RECOMMENDED SUNGRABBER™ COMPONENTS AND HARDWARE SHOULD BE USED IN ORDER TO PROVIDE A TROUBLE FREE SYSTEM. READ THIS MANUAL COMPLETELY BEFORE STARTING. IF YOU HAVE ANY INSTALLATION PROBLEMS OR QUESTIONS, CONSULT YOUR LOCAL FAFCO DEALER. ALWAYS CONFORM TO LOCAL BUILDING CODES.

**CAUTION:** SOLAR COLLECTORS ARE OFTEN INSTALLED ON THE ROOF OF BUILDINGS OR RESIDENTIAL HOMES. UNLESS YOU ARE FAMILIAR WITH WORKING ON ROOFS AND HAVE THE PROPER LADDERS AND SAFETY EQUIPMENT FOR SUCH WORK, YOU SHOULD HIRE SOMEONE WITH THE NECESSARY EXPERIENCE TO DO THE INSTALLATION. FAILURE TO OBSERVE SAFE PRACTICES ON A ROOF OR OTHER ELEVATED STRUCTURE MAY RESULT IN FALLING, LEADING TO SERIOUS INJURY. WHEN INSTALLING COLLECTORS ON THE GROUND, DO NOT BUILD A RACK SUPPORT THAT CAN ALLOW CHILDREN TO ACCESS THE POOL.

## Congratulations!

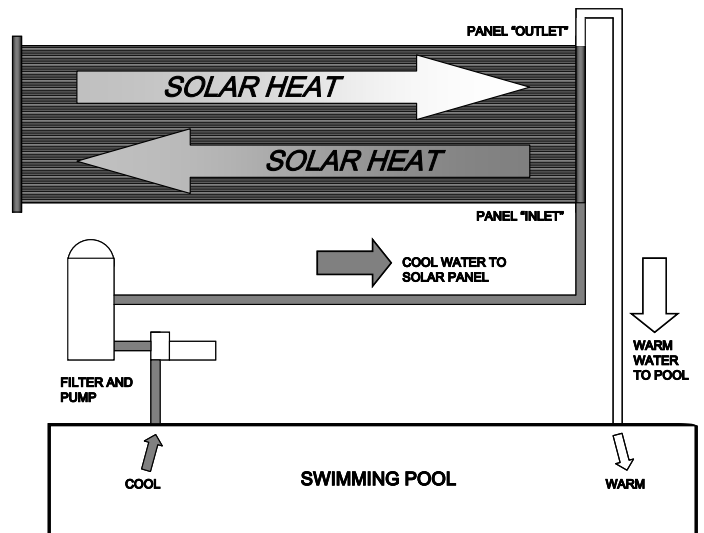
You are about to install a SunGrabber™ Above Ground Solar Pool Heater (AGP) - *The best solar pool heater made!* Based right here in the U.S.A., the manufacturer of SunGrabber™ pioneered polymer solar pool heaters over 30 years ago, and today takes great pride in being the largest and oldest manufacturer in the world. Backed by the longest and best warranty in the industry, your SunGrabber™ is state-of-the-art in solar pool heating technology, and will provide years of FREE HEAT for your pool! In fact, when sized and installed correctly, a SunGrabber™ will raise your pool temperatures up to 10°F, and extend your swimming season.



**Regular use of a solar blanket will enhance the performance of your new SunGrabber™ and allow you to enjoy a warmer pool!**

## HOW DOES THE SUNGRABBER™ SYSTEM WORK?

- The system is designed to be connected to your pool at one end of the solar panel.
- The “Inlet” accepts pool water directly from your pool pump
- An integrated disc at the mid-point within the “Inlet/Outlet” header automatically diverts the right amount of flow through the solar panel.
- Pool water moves through the solar panel picking up the sun’s solar heat along the way.
- Warmed pool water is then returned back to the pool from the “Outlet” side of the panel.
- During the day, solar heat is continually added each time your pool water circulates through the solar panel.



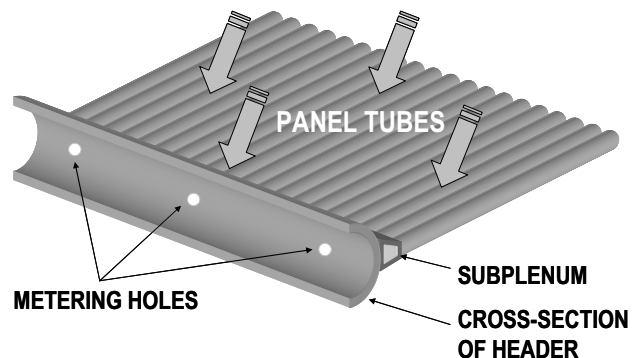
**If your pool water is too warm, circulate the pool water through the solar panel at night to cool your pool!**

## WHY IS SUNGRABBER™ YOUR BEST CHOICE?


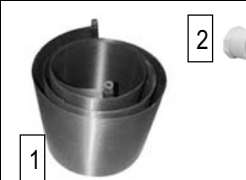

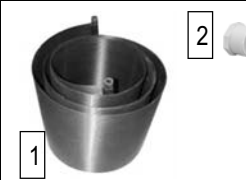

SunGrabber™’s patented tube-to-tube construction and water metering system provides even flow and heating along the entire width and length of the solar panel. These features eliminate inefficient hot spots associated with other solar brands.



1. Pool water enters the header and travels through the metering holes into the subplenum without creating excessive additional backpressure on the pool pump.
2. The subplenum evenly distributes pool water simultaneously to every panel tube.
3. The pool water then flows down the panel creating a fully-wetted surface that is in touch with the sun’s solar heat.
4. A balanced fully-wetted surface optimizes transfer of the sun’s available solar heat to your pool water.



# WHAT'S NEEDED TO INSTALL YOUR SUNGRABBER™?

SunGrabber™ Product		Box Contents by Item (Manual and Warranty Card Not Shown)		SunGrabber™ Product		Box Contents by Item (Manual and Warranty Card Not Shown)	
<b>AGP (Compact) 40,000 BTU's</b>				<b>AGP "Jr" 40,000 BTU's</b>			
<b>Box Contents</b>				<b>Box Contents</b>			
Item	Quantity	Description		Item	Quantity	Description	
1	1	2' x 20' above ground solar panel		1	1	4' x 10' above ground solar panel	
2	2	1" PVC threaded plug		2	2	1" PVC threaded plug	
<b>Additional Parts Required:</b> (1) - Flexible 1 1/2" diameter pool hose, (1) - 1 1/2" hose clamp and Teflon™ tape				<b>Additional Parts Required:</b> (1) - Flexible 1 1/2" diameter pool hose, (1) - 1 1/2" hose clamp and Teflon™ tape			
SunGrabber™ Product		Box Contents by Item (Manual and Warranty Card Not Shown)		SunGrabber™ Product		Box Contents by Item (Manual and Warranty Card Not Shown)	
<b>AGP (Compact) 80,000 BTU's</b>				<b>AGP 80,000 BTU's</b>			
<b>Box Contents</b>				<b>Box Contents</b>			
Item	Quantity	Description		Item	Quantity	Description	
1	2	2' x 20' above ground solar panel		1	1	4' x 20' above ground solar panel	
2	4	1" PVC threaded plug		2	2	1" PVC threaded plug	
3	1	1 1/2" rubber coupler					
4	2	1 1/2" hose clamp					
<b>Additional Parts Required:</b> (1) - Flexible 1 1/2" diameter pool hose, (1) - 1 1/2" hose clamp and Teflon™ tape				<b>Additional Parts Required:</b> (1) - Flexible 1 1/2" diameter pool hose, (1) - 1 1/2" hose clamp and Teflon™ tape			
SunGrabber™ Product		Box Contents by Item (Manual and Warranty Card Not Shown)		<p>The additional parts required may be purchased at your local pool dealer or hardware store.</p> <p><b>TOOLS REQUIRED</b> flat screwdriver 1/4" socket driver</p> <p><b>AVAILABLE SUNGRABBER™ ACCESSORIES</b> 1/2" to 2" Panel Add-on Adapter Kit Panel Add-on Kit Roof/Rack Mounting Kit Manual By-Pass Valve Kit By-Pass Valve Panel Repair Kit</p>			
<b>AGP "Ultra" (Compact) 80,000 BTU's</b>							
<b>Box Contents</b>							
Item	Quantity	Description					
1	2	2' x 20' above ground solar panel					
2	4	1" PVC threaded plug					
3	1	1 1/2" rubber coupler					
4	2	1 1/2" hose clamp					
5	1	1 1/2" ball valve (use optional)					
6	2	1 1/2" x 6' flexible pool hose					
<b>Additional Parts Required:</b> (1) - 1 1/2" hose clamp [optional for by-pass valve: (2) - 1 1/2" PVC TEE, (4) - 1 1/2" PVC hose adapter, (1) - PVC Solvent Primer/Cement, and (1) - Flexible 1 1/2" diameter pool hose]							

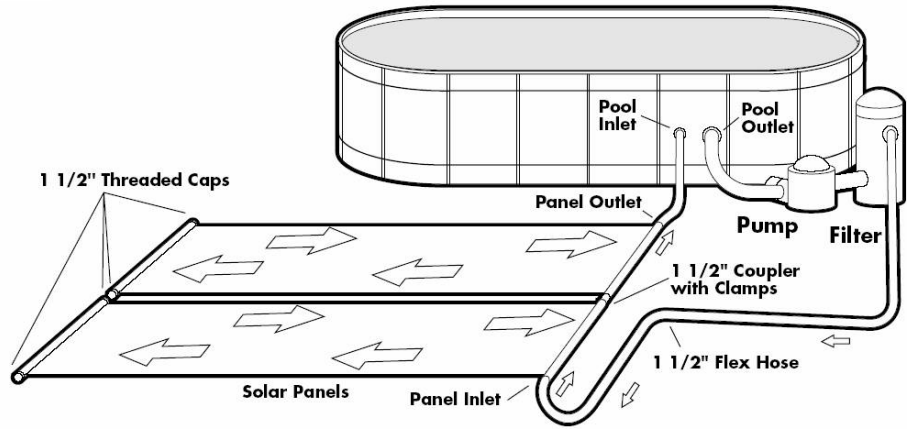
## INSTALLING YOUR SUNGRABBER™

Your SunGrabber™ system is quite versatile in installation and operation. Locate the system where it will have the maximum exposure to sunlight during the day, while keeping it out of foot traffic areas. Afternoon sun is better than morning sun.



**Although SunGrabber™ solar panels are extremely durable, you should never make it a practice of walking on them.**

As long as your pool pump is of adequate horsepower, you have the option of installing the system on the ground next to your pool, on your roof or shed, or on a rack. A 3/4 to 1 1/2 horsepower pump will generally handle installations up to 30 feet away from the pool equipment and one story high. If your pool has a gas heater or heat pump, plumb your solar system in between the filter and gas heater/heat pump. You will see a reduction in your monthly energy bill!



Typical On-ground Installation



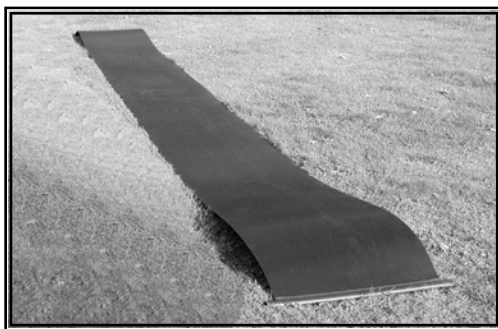
**If you are mounting on a roof or rack, please contact your local dealer for our "Roof/Rack Mounting Kit."**



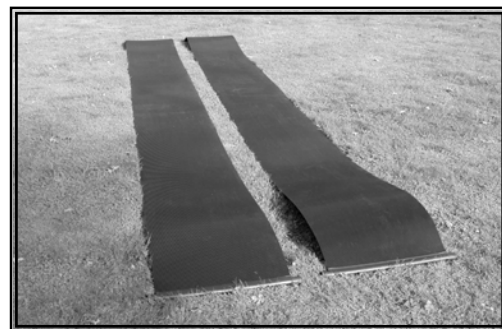
**The optimum flow rate through a solar system is 4 to 8 gpm per panel. If your pool pump is larger than 1 horsepower, and you are installing the solar system at ground level within 30 feet of the pool equipment, contact your local dealer about ordering our "Manual By-pass Valve Kit" to regulate flow and maximize performance.**

### Step 1: Positioning the Solar Panels

Once you have found the optimal location for your system, be sure there are no rocks or other sharp objects lying on the ground that could potentially puncture the solar panels. Turn the SunGrabber™ box on its side and slide the solar panel(s) out. Position the rolled up panel(s) so that they will unroll into the area you have chosen.



One panel products



Two panel products

Gently unroll the panel(s). They may try to roll back up when released. If this happens, place a smooth object of no more than 15 pounds on each end of the panel(s) to hold them flat. After 30 minutes or so in the sun the panel(s) will stay flat.

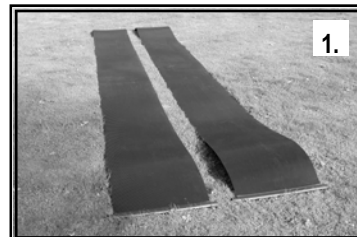
## INSTALLING YOUR SUNGRABBER™ (CONTINUED)

### Step 2: Connecting Hardware

Each panel requires installation of two 1" PVC threaded plugs. Wrap the threads of each threaded plug with about three wraps of Teflon™ tape and screw the plugs into the ends of the panels opposite the inlet/outlet pipe. Hand tighten only. **NOTE: THE "INLET" AND "OUTLET" ENDS ARE MARKED ON THE INLET/OUTLET PIPE.**

### Step 3: Connecting Panels [COMPACT SYSTEMS ONLY!]

1. Position the two panels side-by-side about 6" from each other, making sure that the inlet/outlet ends of each panel are on the same side. Be sure the panels are positioned so that the inlet/outlet ends are closest to your pump and filter.
2. Remove the caps that cover the inlet/outlet pipes on your solar panels.
3. In between the two panels, where the inlet/outlet pipes meet, push one end of the supplied rubber coupler over the pipe opening marked "Outlet." Be sure to push the coupler at least an inch past the raised ribs of the "Outlet" adapter.
4. Slide the two 1 1/2" hose clamps over the coupler. Do not tighten. Push the other end of the rubber coupler over the adjacent panel adapter marked "Inlet." Be sure to push the coupler at least an inch past the raised ribs. Slide the hose clamps into position at both ends of the coupler, about 1/4" from either end, and tighten.

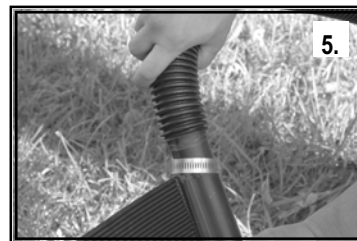


### Step 4: Connecting System to the Pool



***In this step you may use your existing hose if it's long enough. If it is not, you will need to use a length of hose to reach from the solar panel(s) to your pool filter.***

1. Turn off your pool pump and block the inlet and outlet of your pool using the plugs supplied by your pool manufacturer or a suitable alternative.
2. Unhook the hose from the pool inlet (*where the hose connects to your pool after coming from the filter*). If you have a gas heater or heat pump, then unhook the hose from the gas heater/heat pump inlet. **NOTE: REFER TO TYPICAL ON-GROUND INSTALLATION SCHEMATIC ON PAGE 4 FOR POOL INLET LOCATION.**
3. With the hose clamp in place over the solar panel's "Inlet" adapter, push the hose onto the "Inlet" adapter, being sure to slide it at least one inch past the raised ribs. Slide the hose clamp into place and tighten. **NOTE: YOU MAY NEED TO WARM THE HOSE END TO MAKE IT MORE PLIABLE. THIS CAN BE ACCOMPLISHED BY PLACING IT IN HOT WATER FOR SEVERAL SECONDS.**
4. Slide a hose clamp over the 1 1/2" hose that will run from the panel to the pool inlet or gas heater/heat pump inlet.
5. Push the hose onto the solar panel's "Outlet" adapter at least one inch past the raised ribs. Slide the hose clamp into place and tighten.
6. Attach the other end of the "Outlet" hose to the pool inlet or gas heater/heat pump inlet. Again position the hose clamp and tighten.
7. Unblock the inlet and outlet of your pool.
8. Turn your pump on and check the hose clamps and plumbing for leaks. If there is a leak, you may have to tighten the threaded plugs. If a leak is at a clamp you will need to loosen the hose clamp, push the hose further onto the pipe and re-tighten the clamp.



## HEATING YOUR POOL

When the system starts up you will notice tiny air bubbles flowing into your pool. This is the plumbing and solar panel(s) being purged of any air. This is normal and should last a few minutes. To check the performance of the system, turn the pool pump off. Wait 10 minutes and feel the surface of the solar panel. It should be hot to the touch. Now turn the pool pump back on and feel the panel getting cooler to the touch. The difference in temperature is FREE solar heat being added to your pool water!



**Warning:** *If the panel is full of water and has been sitting in the sun without the pump running, the water can get very hot. Hot water can cause burns, so be sure everyone is away from the pool inlet each time the system is turned on.*

For best results, turn on your solar system whenever your solar panels are in the sun. Turn the solar system off at night or when it's raining to prevent cooling the pool. If your pool system has a timer, set it to operate from 9 a.m. until 5 p.m. This is the best solar heating period. Using a solar blanket in addition to your solar pool heater will hold the warmth in the pool and help it heat more quickly. It is particularly important to use the blanket at night or when it's windy. If your pool becomes too warm during the season, turn the pump and solar on at night to help cool the pool.

## WINTERIZING YOUR SUNGRABBER™

Whether mounted on the ground, rack or roof, your solar panel(s) must be drained and stored before the first frost. If water is allowed to freeze in the panel damage may occur. To winterize, perform the following steps.

1. Turn off pool pump.
2. Place plugs supplied with your pool in the pool inlet and outlet. Disconnect both hoses from the "Inlet" and "Outlet" adapters on the solar panel(s). Disconnect the hose from the pool inlet. Connect the hose from the pump to the inlet on the pool and tighten the hose clamps.
3. Remove the plugs from the inlet and the outlet of the pool, and check for leaks.
4. Remove both of the threaded plugs located at the end of the panel(s) opposite the "Inlet/Outlet" pipe. Roll the panel(s) and secure using the original carrying strap. Tilt panel(s) until all the water drains.
5. Replace the original caps onto the panel adapters, and store the panel(s) in the garage or a shed until next spring.



**Freeze damage is not covered under warranty.**

## TROUBLESHOOTING

If you are having an issue with your SunGrabber™, please review this section and the Frequently Asked Questions section that follows. Usually a resolution can be found in these two sections. If your particular issue is not found, please visit us on the web at [www.sungrabber.com](http://www.sungrabber.com) or contact our customer support department at 1-866-SUNGRAB (786-4722).

**Issue:** My system doesn't seem to be working.

**Resolution:** Turn off your pool pump midday in bright sunlight. After 10 minutes have passed, feel the solar panel. It should be quite warm to the touch. Turn your pool pump back on. Wait another 10 minutes and feel the solar panel again. It should be cooler to the touch. The difference in temperature is the heat being added to your swimming pool and indicates that your system is functioning properly. Also, the water entering the pool from the solar panel through the pool inlet should be warmer than the surrounding pool water.

**Issue:** My pool is not warm enough.

**Resolution:** Your system should be up and running for five days to reach optimum temperature. Be sure the system is turned off during the night, or this will cool your pool. Be sure your solar system is getting sun the entire day or at least 4 to 6 hours preferable of afternoon sun. If your system is tilted, be sure it is to the south or southwest with the "Inlet" at the bottom. If the "Inlet" is at the top, your system will not function.

## TROUBLESHOOTING (CONTINUED)

**Issue:** Flow from my pool inlet seems greatly reduced and filter pressure excessive.

**Resolution:** There will be some increase in backpressure on the filter and pump when the solar system is on. Please perform the following checks:

1. Check to see that your filter is properly cleaned.
2. Check that the vinyl caps were removed from the inlet and outlet prior to installation. Also make sure your connections to the solar panel are at the end labeled "Inlet/Outlet."
3. If you have a 1 horsepower pump and the solar system is not elevated and is within 30 feet of the pool, you may need to install our "Manual By-Pass Valve Kit" to regulate flow going through the panel. SunGrabber™ systems function best at a flow rate of 4 to 8 gpm per panel.

## FREQUENTLY ASKED QUESTIONS

The following questions are those asked most frequently by our SunGrabber™ customers. If you have a question or concern about your SunGrabber™, your answer may be found below.

**Question:** Should I use a solar pool cover with my solar system?

**Answer:** A solar pool cover prevents evaporation and heat loss, especially at night when the outside temperature is cooler. If you do not use one, there is a good chance that the heat you added during the day will be lost at night.

**Question:** Can In-ground pool solar panels be used to heat my above ground pool?

**Answer:** Yes, although In-ground solar panel systems are much more expensive to buy and install. And as long as pool pump is of adequate horsepower.

**Questions:** Can I add on more systems if I want my pool warmer?

**Answer:** Absolutely. The more panels—the warmer the pool! Your SunGrabber™ system's modular design accepts additional panels very easily. You will need to order our "Panel Add-on Kit" along with your next SunGrabber™ purchase.

**Question:** Can I use my SunGrabber™ with a gas heater or heat pump?

**Answer:** If you have a gas heater or heat pump installed on your pool currently, simply install your SunGrabber™ between the filter and the gas heater/heat pump, and you will see a reduction in your monthly energy bill!

**Question:** I left my solar panel full of water through the winter and now some of the tubes are leaking. Can it be repaired?

**Answer:** Yes it can. You will need to order our "Panel Repair Kit" from your local dealer. It is very important that your SunGrabber™ is properly winterized each year. (Reference the "Winterizing Your SunGrabber™" section of this manual, page 6)

## CUSTOMER SUPPORT

If your issue was not addressed in our Troubleshooting or Frequently Asked Questions sections, please visit us on the web at [www.sungrabber.com](http://www.sungrabber.com) or contact our customer support department at 1-866-SUNGRAB (786-4722).

## WARRANTY

Your SunGrabber™ is backed by a limited ten-year warranty.



# SunGrabber™

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