

ADDENDUM A

Homeowners Instructions For Solar Pool Heating System Automatic Controls

If your system has been installed with automatic controls then in addition to the normal operating instructions, the following instructions will guide you through the operation of your solar system. The automatic control turns your system on and off depending upon where you set the thermostat and whether there is energy available at the solar collectors.

System Start Up

To initially start your system you will want to set the pump timer as instructed in the manual system instructions. Then take the following steps:

- Set the selector switch inside the automatic control to the "AUTOMATIC" position and turn the thermostat all the way to the high position. The system may take several days to reach the temperature you desire.
- After the pool temperature reaches the desired temperature, turn the thermostat towards low just until you hear the solar system turn off. Be sure that before you try this that the control is already indicating that the water is flowing through the panels.
- You may want to mark the control's face plate with a waterproof pen to indicate that this is the temperature that you like.
- That's it! Your system will now turn on and off automatically to maintain the desired temperature.

The On Position

If you want the water to circulate through the collectors all the time, regardless of the pool and panel temperatures, set the control button to the "ON" or "FLOW-THROUGH" position. This is similar to turning a manual solar system on.

The Off Position

If you want the water to by-pass the collectors regardless of the pool and panel temperatures, set the control button to the "OFF" or "BY- PASS" position. This is similar to turning a manual solar system off.

Please refer back to manual system instructions for further details.



Congratulations on the purchase of your HELIOCOL Solar Pool Heating System. When operated properly, your HELIOCOL system will give you year after year of trouble free service, providing your pool with heat— free from the sun. You will see that your system is very easy to operate. Here are step by step procedures for operating your system.

GETTING STARTED

The first thing you want to do is to set the pump timer so that the pump will run during daylight hours when the sun is shining on the solar collectors. This is already done by the solar technician that installed your system, but at the beginning of each heating season you will want to re-check it.*

TURNING THE SYSTEM ON

When you want your solar system to heat the pool, turn the system on by doing the following:

- Turn your pool pump off.
- Turn your Three-way Valve to the "on" or "flow-through" position
- Be sure to open the Two-Way Valves on the line feeding the solar panels and the line returning from the panels, if your system was installed with two valves.
- Turn your pool pump on.

TURNING THE SYSTEM OFF

When you do not want your solar system to heat the pool, turn the system off by doing the following:

- Turn your pool pump off.
- Allow time for the water in the solar collectors to drain back to the pool.
- Turn the Three-way Valve to the "off" or "bypass" position.
- If you want to completely isolate the solar collectors, close any Two-Way Valves you may have installed on the lines going to and from your solar collectors.
- Turn your pool pump on.

FREEZING WEATHER

Even though the potential for freeze damage to your system is very unlikely, it is a good idea to take some precautions. Whenever possible, the system is installed so that the water in the collectors drains back to the pool automatically when the pool pump turns off. If your system cannot be installed this way, then a drain valve will be installed at the lower corner of the collectors on the roof. This valve should be open in the event of a hard freeze. (Remember to shut the valve before turning the system on again.) An alternative method of freeze protection is to turn your pump on with the solar system in the "on" position. This will cause water to circulate through the solar system to avoid freezing.

*Note: If your system is equipped with automatic controls, refer to Addendum A for additional instructions.

VERIFYING THAT THE SYSTEM IS WORKING

Often homeowners ask, "How do I know if my system is working?" There are a few things that you can look for.

- When you first turn your system on you should see air bubbles. This is normal and expected and may last for up to 30 minutes. As the collectors fill with water, the air is pushed into the pool.
- If you have a pressure gauge on your filter system you will notice a higher than normal pressure reading when your solar system is on.
- When the sun is shining on the collectors and the system is turned on, warmer water should be coming into the pool. Most of the time you can feel this temperature difference, but not always. This difference ranges from 2 to 10 degrees depending on the weather and water conditions.
- When the system is operating the panels should actually feel cool to the touch. This indicates that the water flowing through the panels is taking the heat energy away into the pool.

MAINTENANCE

Your system is virtually maintenance free requiring very little attention. The Three-way Valve on your system comes with its' own instructions.

COOLING YOUR POOL AT NIGHT

Did you know that your solar system can actually work to cool your pool in the hot summer? Simply change the pump timer so that the pump comes on at night instead of during the day. Leave the solar system in the "on" position. This will gently cool your pool water as it flows through the panels at night. Some automatic controllers come with an integrated nocturnal cooling function. This must be engaged by your installing contractor.

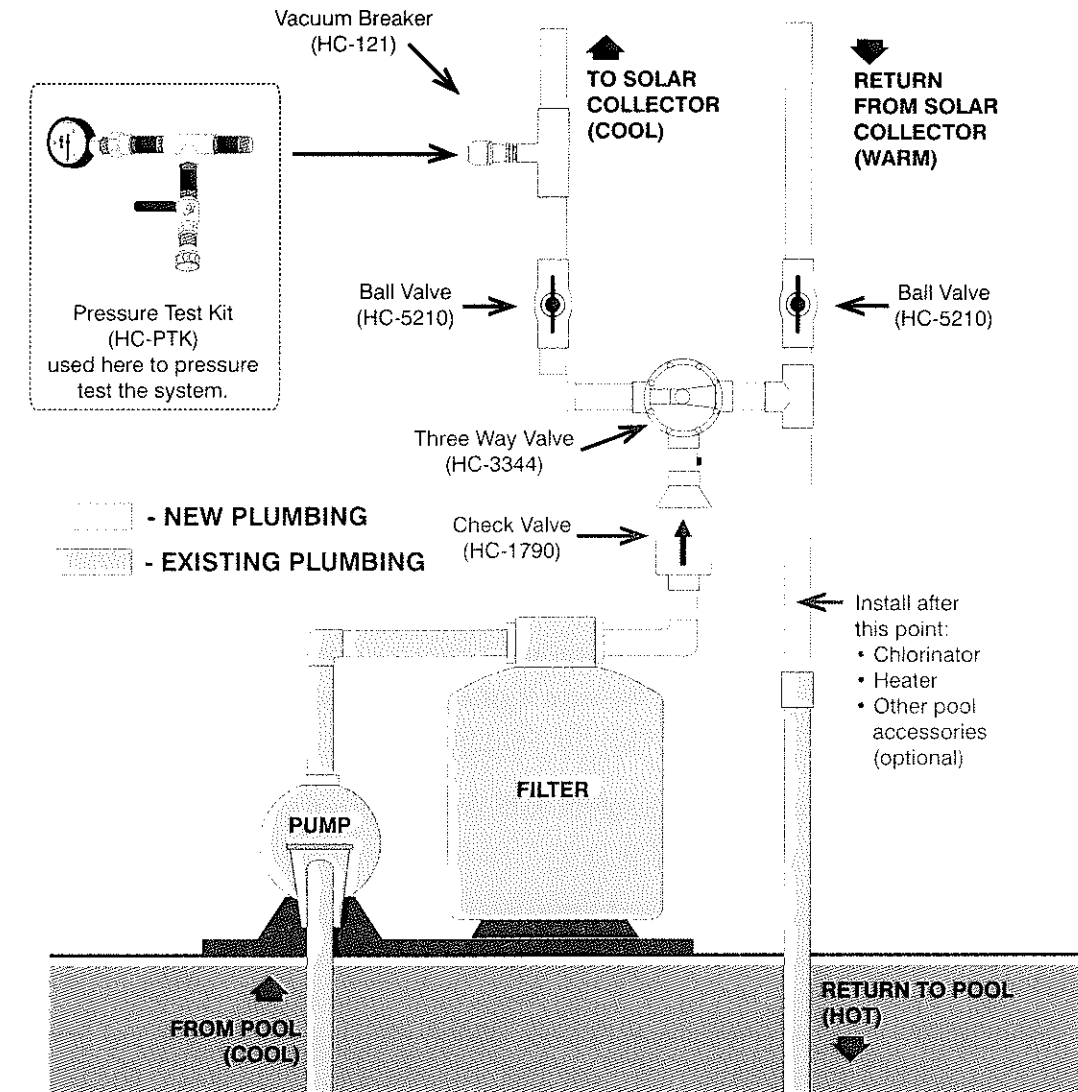
RECOMMENDATIONS

No matter how you heat your pool, it is always recommended to use a solar pool blanket during the cold months of the year. Heat is lost through the surface of an uncovered pool on cold nights. If you need more information on solar pool covers, give us a call.

SERVICE AND REPLACEMENT PARTS

Service on your system, or any additional HELIOCOL Solar Panels and components, Valves, PVC Pipe and Fittings, are all available through your local HELIOCOL Representative.

That's all there is to it! You have a solar heating system that has been tested and proven worldwide for quality and reliability. If you do run into any problems, or if you ever have any questions, please give us a call. We'd be happy to help you however we can.



You may enjoy knowing a little bit about how your system works. Above is a typical layout of how a HELIOCOL Solar Pool Heating System is plumbed into your existing pool plumbing.

This may not be just like your system. The feed and return plumbing on your solar system may be reversed, or you may have a different type of filter, or you may have additional equipment such as a chlorinator, pool sweep, gas heater, etc. In most cases your plumbing will be similar to the plumbing shown above.

Notice that the first check valve is plumbed in after the filter. This prevents the filter from being back-washed by the water draining from the collectors when the pump shuts off. The Three Way Valve either diverts the water to the solar system or directly back to the pool. The Ball Valve on the feed pipe to the solar system allows you to isolate, or completely shut off, the solar system. The Ball Valve on the solar return pipe prevents the water from flowing backwards through the solar system when the solar system is shut off. With proper installation and care you will receive many years of enjoyment from your solar system while harnessing free solar energy to heat your pool!