

# **FAFCO**

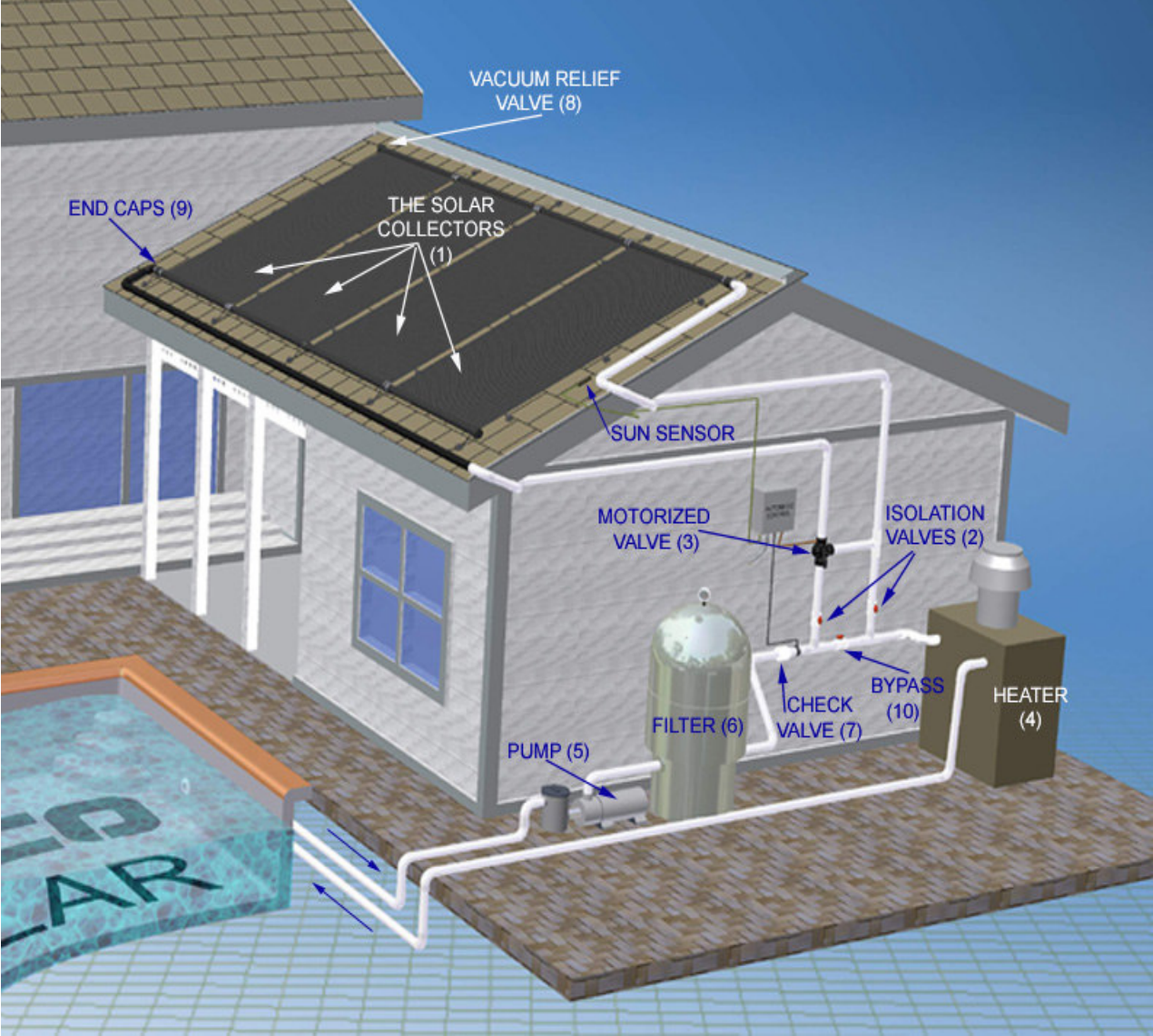
## **SOLAR POOL HEATING**

### **Owner's Manual**



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# **WHAT DO THE VARIOUS COMPONENTS DO?**

## **1. The Solar Collectors**

are the heart of your system. They are the heat exchangers that collect the sun's heat and transfer it to the fast-flowing water that is being pumped through them from bottom to top for optimum efficiency.

## **2. The Isolation Valves**

two valves which are manually operated to isolate the solar system from the filtration system—primarily used when backwashing the filter, or at any time it is desirable to isolate the Solar Collectors.

## **3. Motorized Valve**

receives a signal from the auto control and diverts the pool or spa water to the Solar Collectors.

## **4. Your Heater**

is only needed for supplemental heat boost. You must turn the heater off and on manually.

## **5 & 6. Your Pump and Filter**

are compatible with your FAFCO Solar System and will continue to do their job whether or not the solar is turned on. Your filter can be safely cleaned without damage to the solar system by following the instructions in this Owner's Manual.

## **7. Check Valve**

When the Pump (5) shuts off, the Solar Collectors (1) will drain. The Check Valve prevents the water in the panels from flowing backwards through the Filter (6) and backflushing it into the pool.

## **8. Vacuum Relief Valve**

is installed at the highest point in your system to allow the Solar Collectors to drain.

## **9. End Caps**

seal the headers on the end Solar Collectors in the System.

## **10. Bypass**

When the bypass is 100% open the water flows directly to your pool. When partially closed the bypass regulates flow to the pool. When the bypass is closed all water is diverted to the solar panels.

## **Your FAFCO Solar System**

**Thank you for your investment in the FAFCO Solar System.**

Since 1969, our goal has been to design, test, and produce solar heating systems that will help you get additional swimming pleasure from your pool. Please read the following pages carefully to get the most out of your FAFCO solar heating system.

## **What you can expect from your FAFCO Solar System?**

As wonderful and abundant as solar energy is, performance results are conditional. With systems being installed in every part of the world with widely varying weather and climatic conditions, temperature results may vary. With these considerations in mind, and assuming you're having sunny weather with your system on, **you can expect it to:**

1. Heat the water 2 to 5 degrees F. every time it passes through the system.
2. Raise your pool's temperature 5 to 15 degrees F. over a period of several days of good weather.
3. Eliminate or significantly reduce the cost of operating your fossil fuel pool heater, but not necessarily replace it, during the colder, less sunny months (a pool cover will enhance #2 & 3 above).
4. Give you years of trouble free service.

## **BEFORE YOU CALL FOR SERVICE**

### **If The System Does Not Appear To Be Heating The Pool:**

1. Are the filter and leaf trap clean?
2. Have you been refilling the pool with a lot of cold water lately?
3. Has the weather been marginal?
4. Have you been using your pool cover as instructed?
5. Are the panels operating "cool" to the touch on a sunny day?

### **If There Are No Initial Bubbles When Solar Turns On:**

1. Ensure that the pump is running.
2. Check the isolation valves to make sure they are open.
3. Make sure the control valve is in the correct position.

### **If Tiny Champagne Bubbles Continue**

past the initial purging of the panels (3-5 minutes), this may be an indication that the water circulation through the panels has been reduced to the point where the vacuum relief valve is admitting air either continuously or intermittently. Check the pump, filter, and leaf trap for cleanliness and proper operation. If the bubbles continue with the solar turned off, check the piping leading to the pump for a suction side leak.

Some small bubbles may always be discharged into the pool due to the particular operating characteristics of the individual system. They do not affect the operation of the system nor impair the proper function of any other pool equipment.

## **PREPARING FOR FREEZING CONDITIONS**

The types of installations which are most prone to freeze damage are systems that have panels below the pool water level, systems where the collectors lie flat on the roof or patio cover, or systems which have a piping configuration which does not allow for gravity drainage of the water. All systems, when shut down for the winter, must be checked to ensure that they are completely drained.

1. Turn the solar valve off.
2. Ensure that the pump and filter are not running.
3. For panels below pool level, item 7 must be done before proceeding to item 4.
4. Open any manual drains.
5. Remove end caps at the lowest panel.
6. Let the system drain for **at least one hour**.
7. Close the isolation valves.
8. Turn on the pool equipment, ensuring that the solar valve is turned off. Let the system run for at least 5 minutes while checking to make sure no water is coming out of the end cap area of the panels.
9. Reinstall end caps.

### **When Freezing Conditions Are Over**

and you want to start up your Solar System again:

1. Check that the solar valve is in the off position.
2. Ensure that the pump and filter are not running.
3. Make sure that the end caps and vacuum relief valve are installed and the clamps are properly tightened.
4. Close the drain valve.
5. Open both isolation valves.
6. Turn the solar valve to the on position.
7. Turn on the pump and filter.

### **POOL SERVICE/MAINTENANCE**

Whenever service is required for other components in your pool system (pump, filter, heater, plumbing, etc.), refer to this manual for instructions on isolation of the Solar System and operation of the equipment.



## **OPTIONAL AUTOMATIC SOLAR CONTROLS**

Various optional, electrically operated solar controllers are available from a variety of manufacturers. These controls allow for varying degrees of automation in the pool environment. Controls may be available from the dealer where you purchased the panels or from a pool supply house. You should read and follow the manufacturer's directions in installing these controls to ensure their proper operation and your satisfaction.

FAFCO, Inc. offers a non-electric control, the AC-600, which will turn the solar on whenever there is sun shining on the panels and they can contribute to the pool heat. This control will not control the temperature of the pool. See your dealer for further details.

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