

1 Introduction

Congratulations on the purchase of a Sunward Solar Hot Water System!

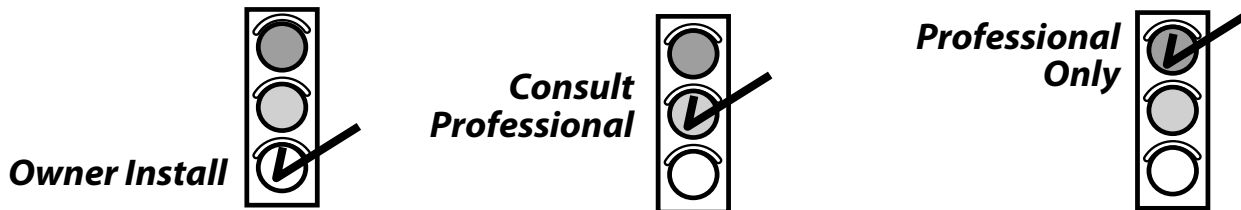
This is the easiest to install, most efficient and most time tested alternative energy system for your home. We have done our utmost to ensure that your Sunward Solar Hot Water System will be trouble-free and satisfying. Please let us know of any questions you may have. We want to answer them as quickly as possible. For technical assistance, please visit our website at:

www.GoSunward.com

While the installation of the Sunward Solar Hot Water System is not a highly complex procedure, there are many variables such as local code variations and structural differences inherent in each installation location.

For this reason, and to prevent voiding your warranty, only qualified, licensed and insured plumbing and building contractors should perform or be consulted for certain aspects of the work.

The following symbols are used to indicate when a professional contractor should be consulted or retained for a specific task:



NOTE: Information given in a Consulting or Professional Only section should be viewed as guidelines to allow your contractor to become familiar with the system and the basic requirements of the task before starting the work.

The Solar Energy System described by this manual, when properly installed and maintained, meets the minimum standards established by the SRCC. This certification does not imply endorsement or warranty of this product by SRCC.



OG 300
OG100

1A: Safety Considerations:

The graphic formats shown below will appear throughout the instructions to indicate potential safety situations or important safety aspects of a procedure about to be undertaken.

DANGER

Indicates a hazardous situation, if not avoided ***will*** result in death or serious injury .

WARNING

Indicates a hazardous situation, if not avoided ***could*** result in death or serious injury .

CAUTION

Indicates a hazardous situation, if not avoided ***could*** result in minor or moderate injury .

NOTICE

This information is important to the proper installation and/or operation of the system. Failure to follow this instruction could result in damage to equipment or property.

1B: How Sunward Works:

The Sunward Solar Hot Water System is extremely effective at absorbing energy from the sun and converting it to hot water. Here is how it works:

1. The Photovoltaic Module produces electricity and turns on the Sunward Solar Pump.
2. The Pump circulates Heat Transfer Fluid (AWWA Glycol Class II) through the Solar Collector.

NOTE: The Glycol is a 40/60% by volume mixture of Propylene Glycol USP and Distilled Water that provides freeze protection to -60°F (-51°C).

! WARNING *Never use anything other than Sunward Glycol Heat Transfer Fluid .*

3. Heat is absorbed by the Glycol in the Solar Collector.
4. The heated Glycol is then pumped to the Sunward Heat Exchanger where the heat is transferred to the potable water, which then circulates naturally to the top of the Sunward Solar Storage Tank.
5. The Solar heated water is stored in the Solar Storage Tank until you draw water from your existing water heater.
6. As hot water is drawn from the existing water heater, it is replaced with solar heated water.

For most of the year, the system will create 100% of your hot water. If necessary, your existing water heater will increase the temperature of the solar heated water. However, the energy required to heat water is significantly less when it is pre-heated by the sun.

NOTE: *To determine the temperature of the solar heated water, open a hot water tap somewhere in the house. This will push water out of the tank and past the thermometers. (Always open a hot water tap to get an accurate reading.)*

1C: Installation Overview

Prior to purchasing the Sunward Solar Hot Water System, a location with good solar exposure for the Solar Collector(s) should have been determined using the Sunward Site Evaluation Kit.

NOTE: *If a solar site evaluation has not yet been conducted, please contact Sunward before proceeding at www.gosunward.com or 1-800-641-3436*

Installation consists of four (4) steps:

*Professional
Only*



1. Install the Solar Storage Tank and Heat Exchanger.
2. Install the Solar Collector(s) Panels and Photovoltaic Module.
3. Run the Sunward **Micro-Tubing** from the Solar Collector(s) to the Heat Exchanger.
4. Cut into your cold water supply line, connect, and charge the system.

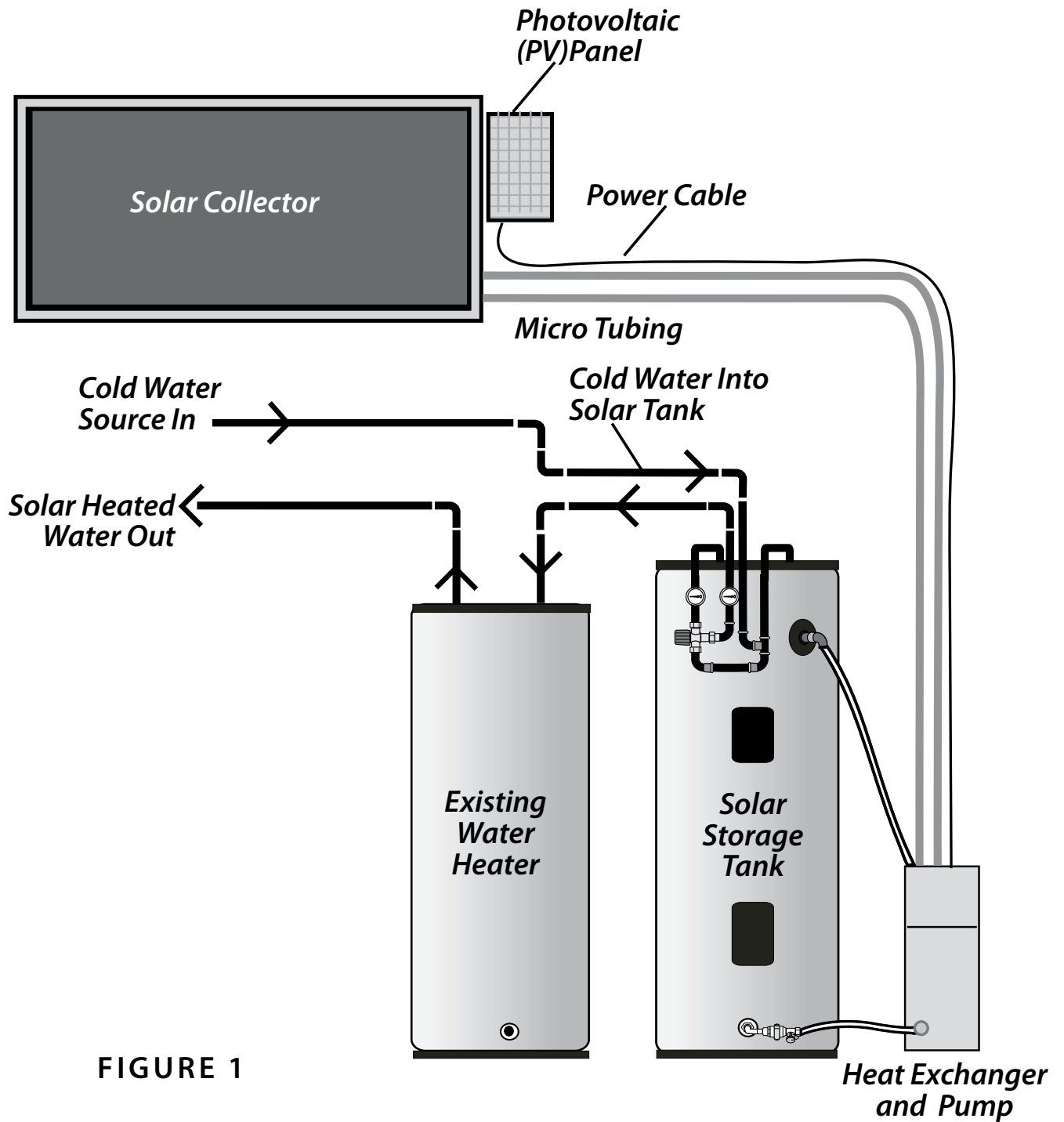


FIGURE 1

1D: Tools Required

Listed below are the basic tools needed for a typical installation of a Sunward Solar Hot Water System. The tools required will vary depending on the Mounting and Installation Kit you have chosen.

- **Pliers**
- **Electric Hand Drill**
- **Adjustable Pipe Wrench**
- **Adjustable Open End Wrench**
- **Open End Wrenches 9/16", 11/16", 5/8"**
- **Pipe Cutter**
- **Deep Wall Socket Wrenches**
- **Tape Measure**

Special circumstances and professional preferences may, of course, require additional equipment and techniques.

Should you have questions or need additional tool information, please feel free to contact our Sunward Solar Customer Service Department at:

Toll Free 1-800-641-3436
www.gosunward.com