

# Solar Water Heater

A step by step guide to make  
your own solar water heater



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FREE HOT WATER FOREVER

**Make a solar water heater in your garage or backyard**

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## Contents

Introduction.....	5
Solar Hot Water System.....	5
List of Components Required.....	6
Construction of a Solar Heater Panel .....	7
Start-up of the solar hot water system .....	16
Increasing the capacity of the solar hot water system .....	16

## **Introduction**

Hot water is a need for every home in all climates. An average family of 5 uses 30,000 gallons of hot water a year. Whether you are using electricity or gas to heat up this water, water heating accounts for up to 40% of your utility bill. So by installing a solar water heater, you can reduce your bill by up to 40%. You can build a solar hot water system using our easy to use step by step guide for less than \$250 in your backyard. You will be able to recover this amount in less than 1 year by the savings from your utility bills. In addition to this, you are helping the environment.

## **Solar Hot Water System**

It consists of a solar heater panel (1), which absorbs heat from sunlight, a hot water storage tank (2); typically 90 gallon capacity is enough to store hot water for the whole day of an average family, an expansion tank (3), a pump that circulates hot water (4) and a piping network with valves to join all of these components together.

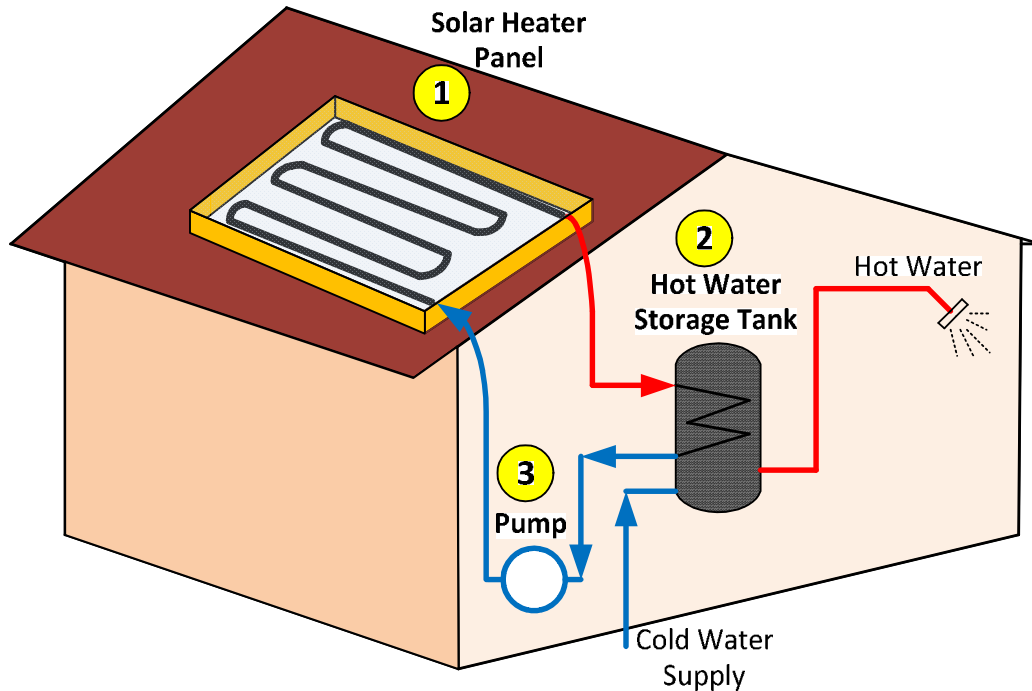


Figure – 1: Solar Hot Water System

### **List of Components Required**

1. Pressure treated Plywood - at least 10 mm(3/8") thick and a width of 0.6 meter(2 ft.).
2. Thin aluminium foil sheet.
3. 10 mm(3/8") diameter copper piping - approx. 7.7 m(25 ft.) long for the solar panel plus extra length for all the connections.
4. Copper tube cutter.
5. Copper pipe brackets, nails and glass clamps (at least 6).
6. Black spray paint.
7. Clear transparent window glass 1.2 meter(4 ft.) length and 0.6 meter(2 ft.) width.
8. Hose piping with diameter greater than 10 mm(3/8").