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Item number: 540 03 07 RB

Benefits of Solar Water Heating

The cost to heat water in your home is likely to be 25 to 30% of your total energy costs; it will be higher if you have more than four people in your home. This may mean that almost half of your electric bill, or more than 40% of your gas or oil bill, will go towards your domestic hot water costs.

Solar water heating is the easiest way to use the sun to save both energy and money. A residential solar hot water system will reduce the energy required to heat your hot water anywhere from 50 to 75%.

Your solar hot water system is eligible for a **federal tax credit of 30%** of the installed cost of the system. This will substantially increase the return on your investment in the system. To find other state and local incentives, go to **www.dsireusa.org.**

Residential Solar Hot Water Systems

The principles of solar hot water heating are very simple. Collectors absorb the heat from the sun and transfer it to the water or other liquid flowing through the risers, in the same way that water in a garden hose will heat up if left lying in the sun.

Let's look at the components of your hot water system and how they work. Your system is made up of:

- Solar collectors
- Regusol unit—a circulating pump and control unit
- A well insulated storage tank with a heat exchanger

To save the most money on your hot water needs, start with the Oventrop "Recession Buster Kit"—the best deal in solar flat plate hot water kits! These hot water kits have everything you need to get started. In addition, they are SRCC certified so that you can take advantage of federal tax incentives. The Oventrop "Recession Buster Kit" complies with the Buy American Act.

Each kit (540 03 07 RB) comes with the following:

Two 3' x 7' panels One 50-gallon tank One Regusol EL-130 pumping station One filling and flushing valve Two flush mounting kits One five gallon pail of solar antifreeze

100%

Recession Buster — Average monthly savings



Performance calculations determined using a daily load of 80 gal. at a 70 degree F rise, and collectors tilted at latitude. Representative cities used are: Boston, MA; Atlanta, GA; Denver, CO; Minneapolis, MN; Los Angeles, CA; Portland, OR.

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How Your Solar System Works

In a conventional water heating system, cold water (approximately 50 - 60 degrees Fahrenheit) is fed from the city supply or your well into the gas or electric water heating system where it is heated to a comfortable level of about 130 degrees Fahrenheit. This takes a lot of energy.

With your solar hot water system, cold water is fed into your solar storage tank. The pump circulates a non-freezing fluid through the solar collectors where it is heated by the sun. The heated fluid is pumped back through the heat exchanger in the storage tank where the heat is transferred to the water.

The Regusol unit continually monitors both the temperature of the fluid in the collectors and the temperature in the tank. If the fluid in the collectors is significantly warmer than the water in the tank, the pump circulates the fluid through the collectors. The Regusol switches off automatically when there is insufficient sunlight and the collectors are no longer able to raise the temperature of the water in the storage tank. This happens when the sun is at a very low angle, when there is a thick cloud cover, and at night. The pump automatically starts again when enough sunlight is available.

Temperatures in your solar storage tank can be as high as 120 degrees Fahrenheit in winter and 150 degrees Fahrenheit in the summer months. When you turn on a hot water faucet in your home, your solar water requires little or no additional heating to get to your required temperature.

Your solar hot water system is used in conjunction with your existing water heating system or with a specially installed solar electric water heater. This system provides the additional heat required to bring your solar-heated water up to your desired temperature. It also copes with increased demand during prolonged cloudy weather or when you have visitors in your home.

Your Investment

Your system is a long-term investment that will provide:

Free hot water, or greatly reduced utility bills, saving you \$100's annually — this can be even more significant if your utility company has a tiered rate structure, charging more at higher levels of usage.

Protection against increased energy prices — once installed, your system will produce all or most of your hot water at no cost.

You are helping to reduce dependence on fossil fuels.

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