

November Newsletter

Crystal Clear Pools of Florida

■ Pool & Spa Service ■ Pool Supplies ■ Pool & Spa Repair

Should I use a Heat Pump to heat my swimming pool?

As fuel prices increase, it's important that you choose the most cost effective and energy efficient method of heating your pool.

There are three basic types of pool heating systems. The best system for your pool is determined by numerous factors including your needs, desires, budget and physical layout of the pool and house. The answers to many of these questions are discussed in this newsletter.



**Solar
Pool Heaters**

Performance & Use

Solar Pool Heaters are best for recreational pool use and are recommended for those who are comfortable with pool temperatures ranging from the low to mid 80's. Solar works year round in southern climates, and extends the season in northern climates. There may be periods during inclement weather that the pool is too cool to use; however, several sunny days will bring the pool back to a comfortable temperature. Proper sizing is critical for good performance.



**Heat Pump
Pool Heaters**

Performance & Use

For those who enjoy swimming regardless of the weather, a Heat Pump is the recommended method. It is also the preferred method for therapy or athletic trainers, and also when a home is not "solar feasible" (i.e. solar will not fit on roof.) A heat Pump, when properly sized, can maintain any desired pool temperature between 80 and 90 degrees, regardless of outside weather conditions. A Heat Pump will work when the outside air temperature is above 45 degrees.



**Gas
Pool Heaters**

Performance & Use

Gas is best for heating pools for short periods of time. Gas Pool Heaters are effective, but expensive to operate. They are ideal for quickly heating the pool when guests or children are visiting, or for a second home where the pool is not heated on a regular basis. Gas Heaters are generally over-sized and can easily maintain any desired temperature regardless of the weather. It is also an ideal heater or backup heater for a spa.

Solar Pool Heaters

How Does It Work?

Solar Heaters utilize the sun's free heat and do not have an operating cost. Your existing pool pump circulates the water through the heater, usually located on the roof, and warms the pool. The pump timer is set to operate during sunlight hours, usually 9am to 5pm.

Solar Pool Heaters

System and Installation Cost

System kit cost range:
\$1000 - \$4800
Installation cost:
\$500 - \$2500

Typical 15x30 free-form pool:
7 (4x12) Deluxe Kit \$1900
\$2800 Standard Installation

Solar Pool Heaters

Energy Rating & Efficiency
Solar panels are rated by FSEC (Florida Solar Energy Center) in BTU's per SqFt. The higher the BTU, the more heat output. The average output is 900 to 1000 BTU's. This equates to a 3 to 7% difference between different brands. To determine the best value, divide the total cost by the total SqFt of panel. The lower the cost per SqFt, the better the value.

Solar Pool Heaters

Cost of Operation

Solar is an alternative energy source, and has no cost of operation. The pool pump must run for the solar heater to function, and may increase your electric bill by \$30 to \$75 per year depending on your normal filtering time.

Solar Pool Heaters

Size Heater Required

Generally you will need a system equal to 50 to 100% of the pool surface. Solar panels are available in 4x8, 4x10, 4x12 and custom sizes. They are generally placed in a row on one or several roofs. A typical 7 4x12 panel system would require a space of 12.5 ft by 29 ft.

Heat Pump Pool Heater

How Does It Work?

A Heat Pump uses electricity to operate. They are actually a form of solar heater, as the sun-warmed air contributes to the efficiency of these units. This heat is extracted from the air, upgraded with a compressor, and then transferred to the water.

Heat Pump Pool Heater

System and Installation Cost

System unit cost range:
\$2400 - \$4600
Installation cost:
\$350 - \$950

Typical 15x30 pool:
\$3200 Unit
\$4200 Installed

Heat Pump Pool Heaters

Energy Rating & Efficiency
Heat Pumps are not rated by any governing body. The manufacturer determines the BTU output at a specific water/air temperature and relative humidity value. To accurately compare one unit to another, these test values must be the same, or the comparison will be distorted. Heat pumps are also given a COP (coefficient of performance) rating, generally 3 to 6 COP, which converts to an efficiency of 300 to 600%.

Heat Pump Pool Heaters

Cost of Operation

Due to their high efficiency, heat pumps have a low cost of operation. Typically, for every 20 cents of electric input, you receive \$1.00 worth of heat. The typical pool averages \$250 to \$500 per year for heat.

Heat Pump Pool Heaters

Size Heater Required

Heat pump sizes are rated by horsepower and BTU output. Standard sizes are 3.5 hp @ 75,000 BTU; 5 hp @ 100,000 BTU and 6 hp @ 125,000 BTU. Heat pumps are normally located next to the pool pump and filter on a concrete slab.

Gas Pool Heaters

How Does It Work?

Gas Heaters use natural or propane fuel. The gas is burned in a combustion chamber where the heat is transferred to the pool water. Operation requires a storage tank for propane gas, or hookup to natural gas, where available.

Gas Pool Heaters

System and Installation Cost

System unit cost range:
\$875 - \$5400
Installation cost:
\$350 - \$850

Typical 15x30 pool:
\$1300 Unit
\$1650 Installed

Gas Pool Heaters

Energy Rating & Efficiency
Gas Heaters are rated in BTU output, and are tested by government standards. Their efficiency ranges from 60 to 80%. Efficiency may decrease over a period of time due to scaling in the burner or heat exchanger.

Gas Pool Heaters

Cost of Operation

The low efficiency of gas heaters result in a high cost of operation. \$1.00 worth of heat requires \$1.20 or more of fuel. The typical pool averages \$1000 to \$1500 per year for heat with propane. Natural gas is approximately 50% less.

Gas Pool Heaters

Size Heater Required

Gas Heaters are rated by BTU output, and range from 75,000 BTU to 450,000 BTU. Gas heaters are normally located next to the pool pump and filter on a concrete slab.

Keep that heat in your pool.

Swimming pools lose energy in a variety of ways, but evaporation is by far the largest source of energy loss. Evaporating water requires tremendous amounts of energy. It only takes 1 Btu (British thermal unit) to raise 1 pound of water 1 degree, but each pound of 80°F water that evaporates takes a whopping 1,048 Btu of heat out of the pool.

Chemists have found a way to save the heat in your pool without using a pool cover. This new device is called a solar pill. It is designed to be placed in the skimmer box for about 30 days. Once in the skimmer, the solar pill will dispense a kind of gel (or liquid) that stays at the surface of the water and reflects the solar radiation that leaks the heat from the pool away

from the water. This will then keep the swimming pool water heated. It is rated as 60% effective and is very easy to use. And each solar pill is pretty inexpensive. So if you are tired of using a swimming pool cover every season and every time you go in and out of your swimming pool, then try the new solar pills. While useful for keeping your swimming pool heated, solar pills do not prevent leaves and twigs from falling into the water.



- Prevents pool water evaporation and heat loss with an invisible layer of non-toxic, biodegradable film
- Works like a conventional solar blanket, but without the hassle
- Easy-to-use...simply drop in pool's skimmer
- Patented time-release delivery system for complete coverage
- Will NOT be affected by automatic pool cleaners

If you are our pool customer and would like your pool technician to add this to your pool each month please fill in the request below and send it back to us.

Pool Blankets: A Solar Pool Cover is the least expensive kind of swimming pool cover. They are also called solar blankets. Solar Pool Covers or Blankets resemble giant sheets of bubble wrap. The bubbles trap heat from the sun and transmit the heat to the pool, keeping the water temperature warm and inviting. The solar cover also helps to trap the heat of the water and prevents its escape into the cool night time air. Solar covers float freely on top of a pool without tie-downs or anchors to hold them in place; therefore, removing a solar cover is easy, just pull it off and store it. This job can be a bit sloppy - imagine folding a giant wet blanket by yourself - but recruiting a helper or the aid of a solar pool cover reel makes the task much easier. Solar covers are usually folded and stored or rolled-up on a large reel and wheeled out of the way. Please let us know if you would like a FREE estimate to supply and fit your pool with a new cover this winter.



The Green Machine Solar Pool Heater

was developed by a swimming pool contractor to meet the needs of his customers regarding heating their pools. The goal was to create a pool heater that would have a low operating cost, low maintenance, and be environmentally friendly.

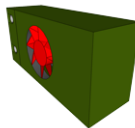
Traditional pool heaters, such as gas, oil, electric, and electric heat pumps, ALL use large quantities of energy to heat the pool. Typical solar systems do not use any energy, but require the installation of unsightly solar panels on the roof. On many homes, there is inadequate roof area, limited Southern exposure on the roof, or excessive shade which reduces the efficiency of the solar panels. High winds and tree limbs often damage roof-mounted solar panels, which may also damage the roof.

The Green Machine Solar Pool Heater is different. It transfers the excess heat in your attic to your pool water using only 300 watts of energy while generating up to 110,000 BTU per hour. As an additional benefit, it reduces your attic temperature, thus reducing your cooling costs and/or the temperature in your home.

The Green Machine Solar Pool Heater is an ideal pool heater to extend your swimming season and to warm up that screen enclosed or shaded pool.

Benefits

- Economical
- Lower Utility Bills
- Low Energy
- Hidden in your attic
- No Carbon Footprint



Pool Covers are TAX Free.

Pool Customer request for solar pill

Sign up for:	Price
<input type="checkbox"/> November	\$12.99
<input type="checkbox"/> December	\$12.99
<input type="checkbox"/> January	\$12.99
<input type="checkbox"/> March	\$12.99
<input type="checkbox"/> April	\$12.99

Subtotal: _____

Tax: _____

Total: _____

Method of Payment

- Check
- Bill Me
- Visa
- MasterCard

Name

Address

Phone

Credit Card # Exp. date

Signature

Crystal Clear Pools

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