

Facts About Swimming Pools

Swimming pools are great for relaxing, exercising or just having fun. But they also mean higher than average energy bills. The key to saving energy with your pool is to correctly manage the filter pump time, pool temperature and lighting. By following some simple steps you can make your swimming pool more energy efficient and more fun.

Using your filter pump

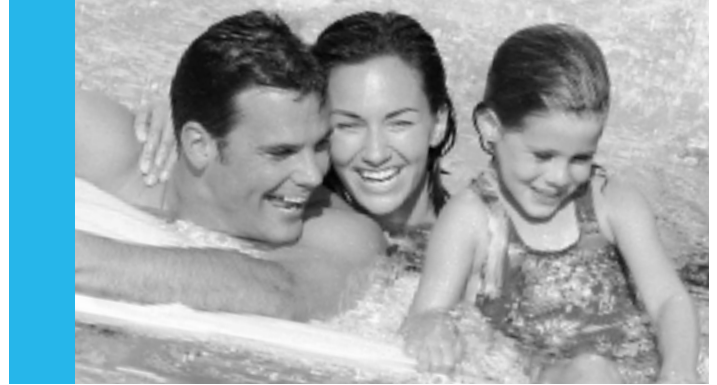
Pools need to be filtered. How long you should filter your pool depends on:

- The size of the pool.
- The filtering equipment.
- How much you use the pool.
- Different environmental factors (such as how much sunlight hits the pool).

As a general rule, one complete turnover of water every 24 hours provides adequate filtering for a single-family pool. The more you use your pool, the more filtering it will need. It is generally recommended that you run your filter for four to six hours a day during the summer and two to four hours a day during the winter. If you're filtering more than this, try reducing your daily filtering time by 30 minutes. After a week, if the water clarity and chemical balance show adequate filtration is taking place, try reducing your filtering time by another 30 minutes. Continue this process until water clarity or chemical imbalance indicates more filtering is needed. In addition to chemical testing, a good way to check your water clarity is that the main drain cover should be clearly visible from the deck.

Automatic pool sweeps (booster pump style)

Usually, three to four hours of daily operation during summer and two to three hours daily in the winter are sufficient. Start



the pool sweep one hour or more after the pool pump has started and stop the sweep one hour or more before the pool pump turns off. On unusually dusty days, increase cleaning time in half-hour increments until the pool is clean. Use a wall brush and leaf skimmer frequently to help the sweep along.

Filter during off-peak times

You can help everyone by filtering your pool during off-peak hours. Avoid operating your pool filter between the hours of noon and 6 p.m. This will help reduce the demand for electricity, conserve natural resources, and save money.

Of course, if your pool has solar heating, you'll need to filter when the sun is correctly positioned for your solar panels. However, we recommend that you minimize filtration during the peak period of noon to 6 p.m. as much as possible.

Setting filtering time

A filter time clock is an easy way to manage pool filtering. Just be sure to check it once a month to make sure the trippers are secure. Check your clock's instruction manual for directions on setting the operation times. Remember to reset the time clock after power outages and for the fall and spring time change.

Preventive maintenance

Follow a regular program of preventive maintenance, including an annual inspection and delimiting of the heat exchanger to help maintain heating efficiency.

Motor and pump assembly

When its time to replace your old motor and pump assembly, consider a new energy-efficient model with a closed impeller and reduced horsepower. It moves more water more efficiently, and may help you reduce your filter operating time by an hour or more. Also consider purchasing a two speed motor with an automatic controller. The high speed is used only when needed for tasks like pool vacuuming, operating the automatic pool sweep and pump operation for the pool/spa combination. Once the heavy work is done, the controller automatically kicks down to low speed for your pool's daily filtration cycle, which may result in energy and money savings for you.

Consumption

The size and operation time of the pump motor determines operating costs. The following chart shows the energy used by different sized standard motors operating for different lengths of time. To find the estimated cost, multiply the figure shown in the chart by 15 cents for electricity.

Monthly energy consumption of various one-speed swimming pool pump motors

Hours Per Day	1/2 HP	3/4 HP	1 HP	1-1/2 HP	2 HP
4	70	105	133	184	239
6	105	157	200	276	358
8	140	209	267	368	477
10	174	262	334	460	597
12	209	314	400	552	716

All of the consumption figures are in kWh per month.

Example: A pool owner has a 1.5 hp filter pump motor and filters the pool for 12 hours per day, using 552 kWh per month. By reducing the filtering time to 4 hours per day, the pool owner uses only 184 kWh each month, saving 368 kWh monthly, which translates to an estimated net savings of \$55 each month.*

* Approximate operating costs are based on 15¢ per kWh. The price you pay may vary depending on market prices, your tiered rate and other factors.

EnergyGuide label

If you're in the market for a new pool heater, the EnergyGuide label can be a very valuable resource in helping you select the most energy-efficient model. Remember, the more efficient the model, the less it will cost to operate. To receive a copy of *EnergyGuide Labels*, contact us at **1-800-411-SDGE (7343)** or by e-mail at info@sdge.com or visit our Web site at www.sdge.com.

Water temperature

The American Red Cross recommends that the most healthful swimming pool temperature is 78°F–82°F. Be sure to use an accurate pool thermometer, since a variance of just four degrees above 78°F could use as much as 40% more energy. Shelter the pool where possible from prevailing winds by using well trimmed hedges or other landscaping, cabanas or fencing as windbreaks.

Solar heating

Swimming pool heating is a popular application of solar energy. If your pool is in direct sunlight, the sun helps to raise and maintain the water temperature free of charge.

Special solar heating pool systems can be installed in your pool to heat water pumped through solar panels. In many cases, you can add a solar system to your existing filter pump and plumbing. Buying and installing a solar-heating system can be a significant investment, so be sure to shop around and get the best combination of price, performance and warranty.

Pool covers

You can save up to 90% on heating costs by simply using a pool cover. Besides helping to minimize nighttime heat loss, pool covers also help prevent chemical loss and water evaporation. These are two types of pool covers:

- Thermal/opaque covers help prevent heat and water loss. If left on during the day, they also transmit some heat to the pool.
- Solar covers help transmit heat to your pool from sunlight. They also help prevent heat and water loss.

When shopping for a pool cover, be sure to check the durability, warranty, insulation value and safety features of the cover, as well as price. If you have small children, be sure to choose a cover that will prevent them from being trapped underneath it.

Sample pool heating costs**

Approximate Costs for a Gas-Heated Pool With Solar Pool Cover

Climate Zone	May	June	July	Aug	Sept
Coastal	\$83	\$31	\$2	0	\$29
Central	\$62	\$23	0	0	\$18
Inland	\$41	\$4	0	0	0

Approximate Costs for a Gas-Heated Pool Without a Cover

Climate Zone	May	June	July	Aug	Sept
Coastal	\$210	\$148	\$89	\$86	\$124
Central	\$191	\$130	\$65	\$57	\$115
Inland	\$176	\$103	\$25	\$27	\$81

**These costs are based on a 512 square-foot pool, with an average depth of five feet, heated to 80° F, with the heater on for 12 hours and the cover on for 12 hours. Heating a pool to 78° F will reduce costs approximately 20%. Gas costs of 85¢ per therm reflect recent natural gas prices. The price you pay may vary depending on market prices, your tiered rate and other factors.

Decorative lighting

Lighting your pool can help make it more attractive and increase safety around the pool at night. To reduce lighting costs around your pool you might consider:

- Compact fluorescent lights use $\frac{1}{4}$ the amount of energy of comparable incandescent lights.
- Motion sensors turn the lights on only when motion is detected.
- Timers to program when the lights turn on and off automatically.

For more information

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