



Environmentally Responsible Swimming Pool and Spa Equipment

From Pentair Pool Products®

Introducing the Eco Select™ Brand

Eco-Friendly Equipment for Pools and Spas

As the global leader in pool and spa equipment, Pentair Water Pool and Spa® is making a strong commitment to develop the most environmentally responsible products available. The new Eco Select™ brand is the keystone of this green program to meet the dual objectives of a growing number of pool owners—to save money and make more eco-friendly choices.

It starts with product development. We have dedicated senior staff whose sole mission is to assure that new and re-engineered products are the most eco-friendly and economically attractive on the market.

You'll see the Eco Select brand associated with several existing products and systems that already meet these objectives. These products save energy, conserve water, reduce noise, or otherwise contribute to a more environmentally responsible pool equipment system. In every case, a product that earns the Eco Select brand is clearly our "greenest" and most efficient choice. The rest of this booklet will introduce you to the products that have earned the Eco Select brand.

We hope you'll join us in embracing more eco-friendly pools by choosing Eco Select products for your swimming pool. If you have any questions, please contact your pool builder or local Pentair pool and spa equipment dealer.





Quick Reference Guide to Eco Select™ Products

Check marks (✓) indicate direct contributions to reduce environmental impact and plus signs (+) indicate indirect contributions.

	Reduce Energy Use	Reduce Water Use ¹	Quiet Operation ²	Long Lasting ³	Low NOx ⁴	EPA- Recognized Refrigerant ⁵
IntelliFlo® vF Pumps	✓		✓	✓		
IntelliFlo® vs-3050 Pumps	✓		✓	✓		
MasterTemp® Heaters	✓		✓	✓	✓	
ThermalFlo™ Heat Pumps	✓			✓		✓
IntelliBrite® LED Lighting	✓			✓		
IntelliChlor® Chlorine Generator	+			✓		
Quad D.E.® Filters	+	✓		✓		
Clean & Clear® Plus Filters	+	✓		✓		
EasyTouch® Automation	+			✓		
IntelliTouch® Automation	+			✓		
SunTouch™ Automation	+			✓		
Legend® II Automatic Cleaner	+		✓	✓		

¹ The average backwash uses between 250 to 1,000 gallons of water; without completely cleaning the filter. H₂OUSE, www.h2ouse.org

² Increasingly, local governments are passing noise ordinances which directly affect pool equipment. In addition, equipment noise reduces opportunities for peaceful pool enjoyment. Noise Pollution Clearing House, www.nonoise.org

³ Products that have a longer service life need to be replaced less often, reducing the impact of waste management and using fewer natural resources for production and transportation.

⁴ Nitrogen oxide (NOx) emissions are primary contributors to smog and acid rain.

⁵ R-410A refrigerant does not contribute to ozone depletion. Use of R-410A is recommended by the EPA but not mandated at this writing.

Variable Speed Pumps

Standard pool pumps can consume as much energy as all other home appliances combined—often costing more than \$1,000 per year! IntelliFlo® pumps can typically cut energy use by 30% to 90%, generally saving \$324 to \$1,356 in utility costs annually—more where rates are higher than average.*



**IntelliFlo® VF
Variable Drive Pump**

**IntelliFlo® VS-3050
Variable Speed Pump**

Revolutionary pool pump typically slashes energy costs 30% to 90%.

- IntelliFlo employs exclusive permanent magnet motors (used in hybrid cars) that provide a typical “base savings” of 30% over any pump with a traditional induction motor.
- IntelliFlo includes a variable drive, digital controls, and proprietary software that allow custom programming of the optimum speed per function—filtering, heating, cleaning, operating water features—for even greater savings...up to 90%. For most all applications, the optimum speed is significantly lower than possible with traditional pump technology, so you can exploit a fundamental pump law: by going slower, power consumption is reduced. In fact, when pump speeds are reduced by half, energy use is just one-eighth of what was previously used.

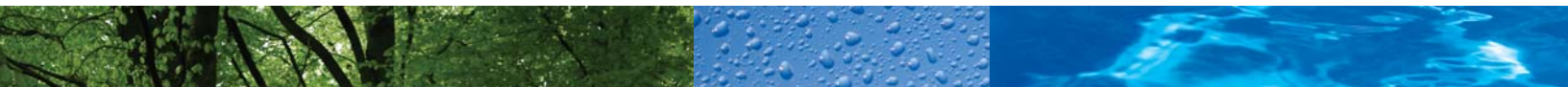
The quietest running pump on the planet

- Thanks again to its permanent magnet motor and totally enclosed fan cooled (TEFC) design, IntelliFlo is also the quietest pump ever built. At typical speeds you barely notice it.

Longer, trouble-free service life—greater return on investment

- IntelliFlo pump’s permanent magnet motor produces far less heat and vibration than traditional induction motors. This results in less stress and wear on pump components and other equipment, too.
- Built-in diagnostics protect IntelliFlo from the most common causes of premature pump failure—overheating, freezing, and voltage irregularities.

*Savings based on comparison pump running between 3.6 and 12 hours per day at the national average of 15¢/kilowatt hour in a 20,000 gallon pool.





Energy Savings

Here are realistic estimates when comparing IntelliFlo® pumps to a traditional pump running between 3.6 and 12 hours per day at various utility rates (in dollars per kilowatt hour [kWh]) in a 20,000 gallon pool.

- At \$0.15/kWh estimated savings range from \$324 to \$1,356 per year.
- At \$0.20/kWh estimated savings range from \$432 to \$1,808 per year.
- At \$0.30/kWh estimated savings range from \$649 to \$2,712 per year.

A note about utility rates

Posted rates and effective rates are not the same thing. Your base posted electricity rate may be 10¢ per kilowatt hour (kWh) or less. So why are we starting our calculations at 15¢ per kWh? We've taken into account the many additional factors that make your effective rate higher:

1. The stated rate is only for electricity used. It does not include user fees and taxes that vary by state and provider.
2. In some states, rates increase substantially as a consumer uses additional electricity beyond a set baseline.
3. Many providers assess a surcharge per kWh during the summer, because demand for electricity is higher.

Visit our **Energy Cost Calculator** at www.pentairpool.com to calculate savings for different sized pools, run times, and utility rates.

POOL PUMP ENERGY COST CALCULATOR

General pool facts: Pool Size: 20,000 gallons, 30' dia, 48" dia

Energy Efficient (IEE) Pump

Traditional Pump	IntelliFlo Pump	Energy Efficient (IEE) Pump
Flow Rate: 1.00	Flow Rate: 1.00	Flow Rate: 1.00
Run Time: 12	Run Time: 3.6	Run Time: 3.6
Estimated Annual Energy Consumption: 144 kWh	Estimated Annual Energy Consumption: 12.96 kWh	Estimated Annual Energy Consumption: 12.96 kWh
Estimated Annual Energy Cost: \$2.16	Estimated Annual Energy Cost: \$1.94	Estimated Annual Energy Cost: \$1.94
Estimated Annual Savings: \$0.22	Estimated Annual Savings: \$0.22	Estimated Annual Savings: \$0.22

Your Savings with the selected IntelliFlo:

Category	Value
Annual Consumption on Existing Equipment	\$2.16
Annual Consumption on IntelliFlo Equipment	\$1.94
Annual Savings	\$0.22

High Performance Heaters

MasterTemp® high performance heaters offer best-in-class energy efficiency. Plus, they are certified for low NOx emissions, making them eco-friendly favorites.



MasterTemp® High Performance Heaters

Best-in-class energy efficiency

- High efficiency rating makes these heaters extremely economical to operate. If your pool heater is more than 5 years old, chances are a MasterTemp could quickly pay for itself in utility bill savings.
- Optimized fuel/air mix provides superior efficiency and faster heat up.

Certified for low NOx emissions

- In fact, our heaters outperform current industry standards for air pollution exhaust.

Super-quiet operation won't intrude on pool leisure time

Built to last longer

- Tough composite exterior won't corrode; stands up to both heat and weather.



Heat Pumps

When a heat pump is appropriate for your climate, it is the most energy-efficient heating option. ThermalFlo™ heat pumps transfer heat from the atmosphere to the pool or spa, saving up to 80% in energy costs compared to gas-fired heaters. Plus, they are the only heat pumps available that use R-410A refrigerant—EPA-recognized as environmentally safe and clean.



ThermalFlo™ Heat Pumps

Saves up to 80% in energy costs

- Heat pumps are the most energy-efficient heating option.
- ThermalFlo uses the most energy-efficient compressor available.
- State-of-the-art fan design improves air flow by 40% to enable high efficiency.
- Check with your pool professional to see if a heat pump is appropriate for your region.

Uses environmentally safe and clean refrigerant

- The only heat pump using EPA-recognized R-410A refrigerant, a safe, clean, and non-ozone depleting refrigerant.

Built to provide long-lasting value

- Tough composite exterior won't corrode; stands up to both heat and weather.

Compare the cost

This chart illustrates how a ThermalFlo Heat Pump generates 2 to 4.4 times more heat for the same cost. Costs are based on national average fuel costs* and efficiencies. Please consult your local provider for current pricing.

Fuel Type	Cost*	BTU/\$.01
Electric	\$.1065/kWh	320
LP Gas	\$1.87/Gal	401
Oil	\$2.22/Gal	472
Natural Gas	\$1.218/Therm	673
ThermalFlo	\$.1065/kWh	1408

*National average as published in the Federal Register, March 21, 2007

D.E. (Diatomaceous Earth) Filters

Water flows very efficiently through Quad D.E.[®] filters, allowing the use of smaller pumps or lower pump speeds to minimize energy use. And when you rinse cartridges rather than backwash, you can significantly reduce water use, too.

More efficient water flow through Quad D.E. filters may allow use of smaller pumps or lower pump speeds to minimize energy use

- Unique internal flow path ensures optimum filtration while reducing overall back-pressure.
- Can be installed without backwash valve, further increasing hydraulic efficiency.

Cartridge cleaning options can significantly reduce water usage

- When you can rinse the cartridges rather than backwash, water use is reduced by hundreds, if not thousands, of gallons per year.
- Large-capacity cartridges provide maximum filter surface area for greater dirt-trapping capacity and fewer cleanings.

Durable construction provides longer service life

- Chemical-resistant, fiberglass-reinforced polypropylene tank provides exceptional strength.



Quad D.E.[®] Filter



Cartridge Filters

Water flows very efficiently through the Clean & Clear® Plus filters, often allowing the use of smaller pumps or lower pump speeds to minimize energy use. And when you rinse cartridges rather than backwash, you can significantly reduce water use, too.



Clean & Clear® Plus Filters

More efficient water flow through Clean & Clear Plus cartridge filters may allow the use of smaller pumps or lower pump speeds to minimize energy use

- Unique internal flow path ensures optimum filtration while reducing overall back-pressure.

Rinsing cartridges uses less water compared to backwashing

- When you rinse the cartridges rather than backwash, water use is reduced by hundreds, if not thousands, of gallons per year.
- Large-capacity cartridges provide maximum filter surface area for greater dirt-trapping capacity and fewer cleanings.

Durable construction provides longer service life

- Chemical-resistant, fiberglass-reinforced polypropylene tank provides exceptional strength.



Pressure-Side Automatic Pool Cleaner

The powerful Legend® II pressure-side automatic pool cleaner does not require a booster pump, providing highly energy-efficient cleaning performance.

Legend II cleaner provides great value in a powerful pressure-side cleaner

- No need to buy or operate a separate booster pump—saving money and energy.
- Front-wheel drive provides maximum traction on inclined surfaces and total cleaning coverage of pool bottom and walls.
- 4-wheel design and wide base prevent tipping (common with 3-wheel cleaners) for uninterrupted performance.
- Dual thrust jets for maximum power, speed, and performance.
- Cleans most pools completely in just 1-3 hours.
- 60% larger debris bag captures more dirt, wider bag opening makes emptying a cinch, and new snap-lock bag provides easy, secure closure.



Legend® II Automatic Pool Cleaner



Automated Color-Changing Lights

IntelliBrite® LED (Light Emitting Diode) color-changing pool and spa lights are the most energy-efficient color-changing pool and spa lighting option available. Plus, they can last 30,000 hours or more, minimizing replacement cost and disposal.



IntelliBrite® LED Color-Changing Lights

LED lights use the least amount of energy of all lighting options

- IntelliBrite LED pool lights need only 37 watts to create the same light output as traditional incandescent and halogen pool lights do at 161 watts—more than 75% less! And IntelliBrite spa lights use only 23 watts for the same light output compared to 47 watts for traditional lights. That's because incandescent and halogen bulbs use only a small amount of their electricity consumption for emitting light. LED lights, by contrast, use 100% of energy to produce light.

LED lights are more durable and can last longer

- The life of an IntelliBrite LED is approximately 30,000+ hours compared to only 5,000 hours for a traditional incandescent bulb.
- Cool running LED lights are durable, solid state technology, with no internal filament to wear out.
- Unlike many LED pool lights, IntelliBrite lights continue to work even when a single LED fails.

Automation

Pentair control systems can optimize energy use and equipment performance by automating and synchronizing equipment scheduling. They prevent problems and waste so you don't have to rely on your memory or limited time clocks to operate or turn off equipment.



**IntelliTouch®
Automated Controls**



**EasyTouch®
Automated Controls**



**SunTouch™
Automated Controls**

Automated control systems can help offset rising utility costs.

- Equipment schedules are easily altered to account for changes in pool usage, weather, and other factors that impact overall equipment performance.
- Equipment isn't accidentally left on for extended periods, thereby wasting energy (for example: lights, cleaners, heaters).
- Control systems make it easier to take advantage of off-peak, seasonal utility rates.



Automatic Chlorine Generator

Using only natural table salt, the IntelliChlor® automatic chlorine generator creates pure chlorine in your pool and eliminates the need to buy, store, and add harsh chlorine products manually. In effect, fewer resources are used in the production, packaging, and transportation of these chemical compounds.



Production and transportation energy and waste are reduced

- Less chlorine needs to be produced at chemical processing plants for use in swimming pools and spas. This reduces emissions and energy use from production, packaging, and transportation.

Provides effective sanitization performance without the drawbacks of expensive chlorine compounds

- You no longer need to buy, transport, store, or handle chlorine products. This reduces the chance of spills or accidental exposure and eliminates cost.
- Because the chlorine is pure, the odor, stinging eyes, and irritated skin caused by additives in packaged chlorine are eliminated.

IntelliChlor® Automatic Chlorine Generator

Engineered to stand up to the toughest pool conditions and provide years of dependable service

- Rated for more than 10,000 hours of operation—five years of reliable chlorine output under normal operating conditions.
- Control electronics are isolated in the cell for longer cell life.
- Waterproof electronics for maximum reliability.

How the Systems Approach Delivers Even More

As you've seen, there is a compelling "green case" for our products under the Eco Select™ brand. Every one of these products can lay claim to saving energy, water, reducing noise, maintaining air quality, or delivering combinations of these environmental benefits.

Perhaps most compelling of all is when you link these "best in breed" choices into a single green system. Not only do you deliver individual products that are more environmentally responsible than other choices, there can be synergistic effects as well.

Examples include:

- Optimize pump speed for your filter choice and you'll automatically improve the effectiveness of the filter media. It will trap more dirt by allowing better utilization of the media's surface area, postpone pressure increases, and extend the time between cleanings. You minimize energy use on the front end, minimize wash water use on the back end, and get cleaner water all along the way.



- Optimize flow to the heater and it heats water more quickly and efficiently so run times may be reduced and energy saved.
- Run the filter pump longer at lower speed/flow for energy savings, and you make sanitization chemicals more effective when circulation intervals are extended...this improves water quality with less total chemical consumption.
- Variable speed pump capability minimizes energy use by solar systems that require high pressure to initiate but less pressure to maintain circulation.
- Optimize the performance of pressure-side cleaners by adjusting the output flow of a variable speed pump rather than relying on an oversized conventional pump or booster pump—by matching the flow to the collection capability of the cleaners, you optimize cleaning while minimizing energy use.



Your pool professional will help you optimize your system for peak performance to minimize your energy and water use.

Energy-Saving Pool Tips

To support your efforts to make your pool and spa as economical and eco-friendly as possible, below are some changes you can make that can help conserve energy and water while reducing your operating costs.

Heating & Heat Loss

- Reduce heat loss by using a pool cover. According to the U.S. Department of Energy, savings of 50%–70% are possible.
- Fencing, hedges, landscaping, and cabanas that shelter your pool from prevailing winds will further reduce heat loss.
- If you use your pool only on weekends, reduce your heater or heat pump thermostat settings by eight to ten degrees during the week.
- When leaving for vacation for more than a week, unless freezing conditions are expected, turn off the pool heater or heat pump.
- According to the National Swimming Pool Institute and the American Red Cross, the most healthful swimming temperature is 78°F. Reducing your heater or heat pump thermostat to maintain a 78°F or lower temperature will also help conserve energy.

Circulation

- Replace your pool pump with a more energy-efficient model.
 - New variable speed pumps with permanent magnet motors and digital controls can save as much as 90% in utility costs compared to one- or two-speed pumps with induction motors.
 - If using an energy-efficient one- or two-speed pump, make sure your pump is sized to your pool's requirements.
- Reduce pump speed to reduce energy use. Remember the pump law: reduce speed by half and energy is just one-eighth of what was previously used.
- For good water maintenance, circulate water through filter only once per day. Additional cycles are generally unnecessary and waste energy.
- Run your pool's filtration system during off-peak hours when electricity demand is lower, generally between 8 p.m. and 10 a.m.
- Keep intake grates clear of debris. Clogged drains require the pump to work harder.
- To obtain maximum filtration and energy efficiency, clean your filter regularly, as required.





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