



Environmentally Responsible Swimming Pool and Spa Equipment

From Pentair Pool Products®

Eco Select™ Brand

Eco-Friendly Equipment for Pools and Spas

As the global leader in pool and spa equipment, Pentair Water Pool and Spa® has made a strong commitment to develop and offer the most environmentally responsible products available. The 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 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 poolsapes by choosing Eco Select products for your swimming pool. If you have any questions, please contact your pool builder or local Pentair Pool Products® pool and spa equipment dealer.





Quick Reference Guide to Eco Select™ Branded 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	Non-Ozone Depleting Refrigerant ⁵
IntelliFlo® vf Pumps	✓		✓	✓		
IntelliFlo® vs-3050 Pumps	✓		✓	✓		
IntelliFlo® vs+svrs Pumps	✓		✓	✓		
MasterTemp® Heaters	✓		✓	✓	✓	
UltraTemp® Heat Pumps	✓			✓		✓
ThermalFlo™ Heat Pumps	✓			✓		✓
IntelliBrite® LED Lighting	✓			✓		
IntelliChlor® Chlorine Generator	+			✓		
Quad D.E.® Filters	+	✓		✓		
Clean & Clear® Plus Filters	+	✓		✓		
EasyTouch® Automation	+			✓		
IntelliTouch® Automation	+			✓		
SunTouch® Automation	+			✓		
Kreepy Krauly® Legend® II Automatic Cleaner	+		✓	✓		
Kreepy Krauly® Prowler® Robotic Cleaners	+		✓	✓		

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.nononoise.org

³ Products that have a longer service life need to be replaced less often, reducing the impact of waste management and natural resources required 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. Federal law will prohibit the use of R-22, an ozone depleting refrigerant, in 2010.

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 cut energy use up to 90%, generally saving \$620 to \$1,360* in utility costs annually—more where rates are higher than average.



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

**IntelliFlo® vf
Variable Flow Pump**

**IntelliFlo® vs+svrs
Variable Speed Pump**

Revolutionary pool pump slashes energy costs up to 90%

- IntelliFlo employs exclusive permanent magnet motors (used in hybrid cars), a fundamentally more energy-efficient design compared to traditional induction motors.
- 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, and more. 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.
- The result of these combined innovations is impressive savings... up to 90%.

*Savings based on comparison pump running between 6 and 12 hrs/day at a national average of \$0.15/kWh in a 20,000 gallon pool. Savings may vary based on plumbing size and length, pump model, service factor, flow rates and other hydraulic factors.

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 low speeds, you may not even know it's operating.

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

- 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.

Now with added swimmer safety

- New SVRS models feature a Safety Vacuum Release System that provides an added layer of anti-entrapment protection. It detects drain blockage and automatically shuts the pump off.





Energy Savings

Here are realistic estimates when comparing IntelliFlo® pumps to a traditional pump running between 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 \$620 to \$1,360 per year.
- At \$0.20/kWh estimated savings range from \$825 to \$1,810 per year.
- At \$0.30/kWh estimated savings range from \$1,240 to \$2,710 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 Savings Calculator** at www.pentairpool.com to calculate savings for different sized pools, run times, and utility rates.

Pool Pump Cost Savings Calculator

Estimated savings range from \$620 to \$2,710 per year.

Utility Rate	IntelliFlo® Savings	Traditional Pump Savings
\$0.15/kWh	\$1,360	\$620
\$0.20/kWh	\$1,810	\$825
\$0.30/kWh	\$2,710	\$1,240

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 extreme weather conditions.



Heat Pumps

When a heat pump is appropriate for your climate, it is the most energy-efficient heating option. UltraTemp® and ThermalFlo™ heat pumps transfer heat from the atmosphere to the pool or spa, saving up to 80% in energy costs compared to other types of heaters. Plus, they are charged with R-410A refrigerant, an environmentally safe, clean and non-ozone depleting refrigerant.



UltraTemp® Heat Pumps

ThermalFlo™ Heat Pumps

Saves up to 80% in energy costs

- Heat pumps are the most energy-efficient heating option.
- UltraTemp and ThermalFlo use the most energy-efficient compressor available.
- State-of-the-art engineering design provides improved air flow, efficiency, heat output, sound reduction and overall performance.
- Check with your pool professional to see if a heat pump is appropriate for your region.

Uses environmentally safe and clean refrigerant

- The first heat pump that uses R-410A refrigerant, well ahead of federal law that will prohibit the use of R-22, an ozone depleting refrigerant, beginning January 1, 2010.

Built to provide long-lasting value

- Tough composite exterior won't corrode or fade; stands up to extreme weather conditions.

Compare the cost

This chart illustrates how UltraTemp and ThermalFlo heat pumps generate up to 5.8 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/\$1.00
Electric	\$0.114/kWh	29,930
LP Gas	\$2.510/Gal	29,729
Oil	\$3.380/Gal	31,065
Natural Gas	\$1.370/Therm	59,854
UltraTemp	\$0.114/kWh	173,593
ThermalFlo	\$0.114/kWh	137,677

*National average as published by the Department of Energy (2008)

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 cartridge 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 Cartridge 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.



Automatic Pool Cleaners

The powerful Kreepy Krauly® Legend® II pressure-side pool cleaner and Kreepy Krauly® Prowler® robotic cleaners provide highly energy-efficient cleaning performance.



**Kreepy Krauly®
Prowler® 710**
Robotic Pool Cleaner



**Kreepy Krauly®
Prowler® 720**
Robotic Pool Cleaner



**Kreepy Krauly®
Prowler® 730**
Robotic Pool Cleaner



**Kreepy Krauly®
Legend® II**
Automatic Pool Cleaner

Kreepy Krauly Legend II provides great value and powerful pressure-side cleaning

- No need to buy or operate a separate booster pump, which saves 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.
- 60% larger debris bag captures more dirt, wider bag opening makes emptying a cinch, and new snap-lock bag provides easy, secure closure.

Kreepy Krauly Prowler robotic cleaners offer fast, eco-friendly cleaning performance

- No booster pump required.
- Integrated filter reduces run time of your primary filtration system up to 25%, saving energy use and minimizing wear and tear.
- Plugs into a standard electrical outlet, using minimal power consumption.
- Dual pressure wash jets lift sand, silt and algae off the pool floor and walls—including surface pores where brushes can't reach.
- Cleans any size, shape and type of standard residential pool in just 60–90 minutes.



Automated Color-Changing and White Lights

IntelliBrite® LED (Light Emitting Diode) pool and spa lights are the most energy-efficient pool and spa lighting option available. Plus, they can last longer, minimizing replacement cost and disposal.



IntelliBrite® LED Lights

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

- IntelliBrite pool lights need only 37 watts to create the same light output as traditional incandescent and halogen pool lights 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.

LED lights are more durable and can last longer

- 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 goes out.

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.



IntelliChlor® Automatic Chlorine Generator

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.

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

- Rated for 10,000 hours of operation under normal operating conditions.
- Control electronics are isolated in the cell for longer cell life.
- Waterproof electronics provide 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:

- Optimizing pump speed automatically improves the effectiveness of the filter media. It traps more dirt by allowing better utilization of the media's surface area, postpones pressure increases, and extends 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.

- Optimizing flow from the pump to the heater results in faster heat-up and greater efficiency so run times may be reduced and energy saved.
- Running the filter pump longer at a lower speed/flow for energy savings also improves the effectiveness of sanitization chemicals... delivering improved water quality with less total chemical consumption.
- Variable speed pump capability minimizes energy use by solar-powered systems that require high flow to initiate but less flow pressure to maintain circulation.
- Adjusting the output flow of a variable speed pump to match the exact requirements of a booster-free pressure-side cleaner, rather than relying on an oversized conventional pump, optimizes 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% to 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: by going slower, power consumption is reduced.
- 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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