



Why the IntelliFlo is the only pump we use!

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We use the Pentair IntelliFlo and IntelliPro pumps as the minimum standard on every project we build, and have been for years. The amazing thing is that we don't just spec these pumps for any one reason. It is true that some reasons are more compelling or have more significance, but the reality is, using this pump creates the most efficient, long lasting pool plumbing system and the easiest filtered and chemically balanced pool; and that is just the start.

I intend to try to keep this information timely, to the point, and also keep it in layman's terms in order to help educate the consumer. The main reason; it is my experience that it is more often the consumer pushing the industry by asking questions. Unfortunately our industry as a whole invests little in education and training, and likes to "do it like it has always been done." The problem is that it was very rarely being done correctly and Pentair's advancements in technology have changed everything.

Let me list the many reasons and benefits of using this incredible pumping technology, in order from most to least important. (in my humble opinion)

Reason 1: Energy Efficiency

I am going to attack the energy efficiency item from multiple directions. First, because of the electric motor technology used in designing this pump (Permanent Magnet Synchronous Motor or PMSM) it is 30% more efficient than any other pump on the market at any given speed or horse power. In general a typical induction motor is around 20-30 % efficient. An "energy efficient" motor (with a capacitor) is around 40-65% efficient. A permanent magnet synchronous motor (PMSM) is around 90% efficient.

For those of you who need to dig deeper and understand why, go here and it will explain exactly how this motor operates so much more efficiently. <http://technicalpoolrepair.blogspot.com/2010/01/pool-motor-efficien...>

So if we replace an existing pump on any pool with this pump, set it to the same HP and same schedule we will save at least 30%. Awesome -- but just the beginning. The real savings comes with the true variable speed capacity. There has rarely ever been a pool built that did not have an oversized pump. -Why you ask, because we can always close a valve or divert the excess water in motion back to the pool, but the only way to make sure you had enough water in motion was to install a pump larger than you might need just in case. With this pump we can actually dial in the speed exactly, giving us just the amount of volume and pressure to meet our needs, without wasting any excess energy. It still gets much better! The enemy of energy efficiency when pumping water is velocity within the pipe. Velocity Kills! We know that in order to operate some cleaning systems, we need the water to move pretty swiftly. However we only need the higher velocity for a few hours at most. But yet we need to run the pump for 3-4-5 more hours in order to get the overall pool water turnover we are looking for and we do that at the same high velocity if we are using a standard pump. Solution; run the IntelliFlo pump at a dramatically lower pump speed (lowering velocity) for a longer time. Seems like if we are moving the same amount of water it would use the same energy right? NOPE. The friction reduction by slowing down the velocity is dramatic, and decreases the amount of energy required. The simple math is this: if you cut the speed in half(also decreases volume by 1/2), you cut the power used by 1/8. Since you now need to run the pump twice as long to move the same amount of water, you end up using 1/4 the power. Cut speed by 1/4, use 1/12 the energy. It is that simple. If we move the water slow enough, we can almost negate the friction during filtering the water.

Check out this video <http://www.youtube.com/watch?v=4dlz4R-1d2k>

Reason 2: Water Quality

One of the major problems in pool water quality is a lack of uniform temperature and chemicals, caused by stagnant water. Most pools run roughly 6 hrs a day and sit for the remaining 18 hours. This causes the water to separate into multiple temperate levels depending on depth and sun exposure. This causes chemicals like chlorine to detent off of the surface of the warmer water, and is often the cause of algae growth in shallows and benches. Solution, run the filtering cycle throughout the entire day, possibly even 24 hrs a day. The Pentair IntelliFlo pump allows us to adjust the speed to accomplish the correct turnover at the slowest speed, which in return is the most energy efficient, and keeps the pool water consistent throughout the depth and location.

Reason 3: System Performance and Longevity

The Pentair IntelliFlo pump system also has a slow start and stop function. This means that the pump gradually speeds up and slows down between speed changes and start and stop functions. You will no longer have any water hammer or energy spikes within the system. This is a huge longevity issue with the plumbing fittings, pump seals, and o-rings and filter elements

Newer filter types operate more efficient and filter water better at lower pressures and velocities. So not only are we saving energy at a slower speed, we are filtering water more effectively.

Every other pump system typically forces us control the flow in the most ineffective way. I like to equate this to driving a car. A normal pool pump runs like putting the car in drive and putting the accelerator on the floor the entire time. However when you need less water, you simply ride the breaks in order to slow the flow, so you are causing undue pressure and wear on the system in order to control flow. The IntelliFlo Pump lets you lift off the accelerator and slow the motor down to the needed speed.

Reason 4: Being Truly Green

One can already argue that saving energy is green. That is only the beginning. By using an IntelliFlo pump, we are creating a more sustainable overall hydraulic system, meaning we will use less energy to create new parts and new trips out to work on the system over the systems lifetime. We also have the ability to control the pump speeds with automation, add in some automated valves, now we can operate an infinite number of systems, jets, water features, solar heaters, cleaners etc. with one single pump. How much energy do you think it takes to create 2 additional pumps, resources needed in raw materials, and the fuel and energy used to ship that product across the earth. Is IntelliFlo green? YOU BET, the GREENEST!

If you don't have an Pentair IntelliFlo or IntelliPro pump, it is time to make the change. If you are about to purchase a new pool, make sure you insist on the most effective pool pump period. Pentair IntelliFlo!

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