

## Benefits of a Variable Speed Pump (VSP)

Pools are a luxury and maintaining one can add up in costs over time. A Variable Speed Pump (VSP) can help you save hundreds of dollars a year, regardless of whether you have the VSP on automation, or as a standalone unit. There are differences and advantages to using either one, as we will discuss below.

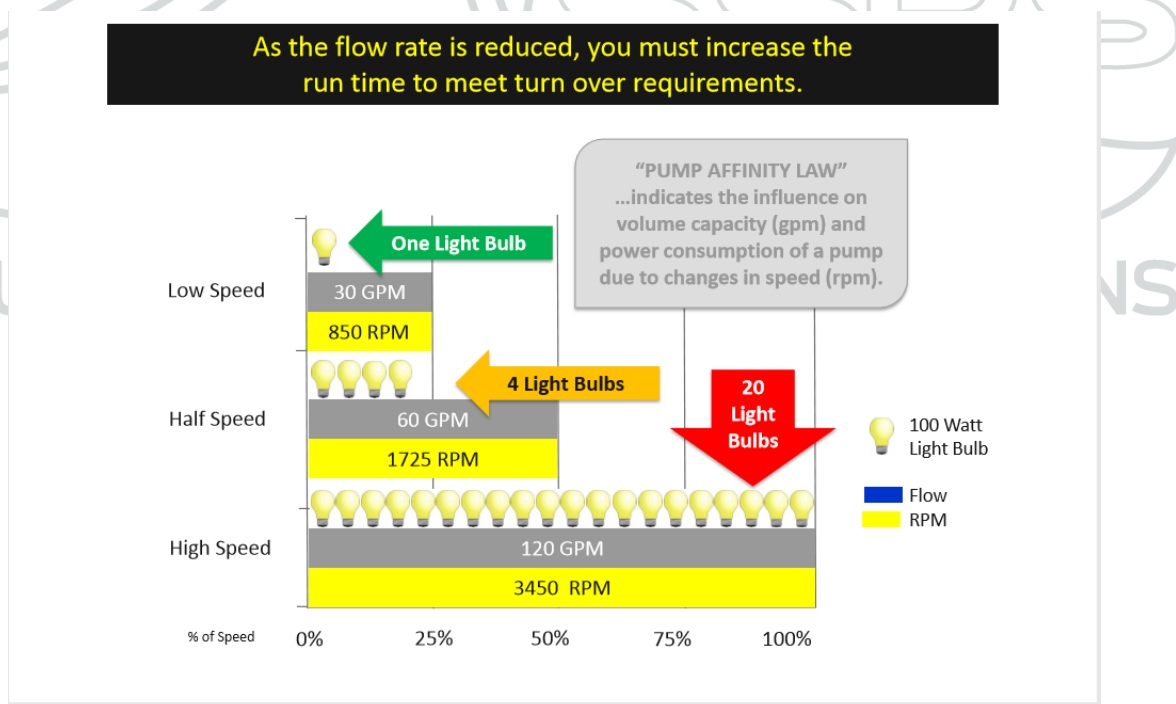
### Standalone VSP System

Fundamentally, a VSP decreases the resistance in the filter plumbing and increases the run time of your filter system to maximize the energy savings.

Normally, a single speed pump runs constantly at 3450 revolutions per minute (RPM). With a VSP system, however, the RPM of the filter pump can be decreased. As the RPM of a VSP are decreased, the resistance in the filter plumbing is also lowered. This causes the pump to draw less amperage, lowering your kilowatt per hour usage, thus saving you money on your electric bill.

When reducing the pump speed by half, the flow reduces by half as well. When the flow is decreased to half, the resistance in the plumbing reduces to approximately a quarter of the resistance that a single speed pump has. The energy consumption reduces to 1/8 of a single speed pump. Over time, this will add up to a significant amount in savings as you maintain your pool year after year, while also prolonging the life of your system.

Below is a diagram on how changing the RPM of your pump with a VSP saves you money.



## Automation VSP System

With a VSP connected to automation, we can take your energy savings even further.

Every item in your filter system runs at its peak efficiency with a different Gallon Per Minute (GPM) rate. For example, a chlorine generator only needs 15-28 GPM to satisfy a flow switch and start generating chlorine. A heater needs a minimum of 30 GPM for it to ignite and start heating the water. While the heater only needs 30 GPM for it to fire, the best heat transfer to water happens at about 70 GPM. To address this discrepancy, in an automated VSP, the pump RPM would automatically turn down to satisfy the flow switch on the chlorine generator so it sanitizes the pool at a low speed, saving you money.

When you want to heat the pool, you would activate the heater from the automation and the pump RPM automatically increases until the pump is pushing 70 GPM, giving the heater maximum heat transfer. When the heater runs at its peak efficiency, it runs for less time and increases its life expectancy. Not only does this save you money on electricity, it also saves you money on gas and repairs. Once the pool is heated to the set temperature, the pump automatically turns down to the lower GPM needed to satisfy the chlorine generator flow switch.

In addition to the Automated VSP system automatically adjusting the speed of the pump, you can connect any device you wire to it (e.g. landscape lights, pool lights, water features, fire bowls, air blowers, booster pumps, pools cleaners, and infinity edge pumps). With upgraded automation, you can get all these features and have global access right from your smart phone.

If you are interested in a Variable Speed Pump system and would like to know more, we would be more than happy to run an energy audit and provide an estimate on any VSP system to find the right fit for your pool and budget.

**SOUTH SHORE POOL SOLUTIONS**