

# Viron P280 Vari Speed Pump

## Application

- A filtration pump for pool owners seeking quiet operation, reduced carbon emissions and significant reductions in operating costs.
- P280 will feature the same wet end as the CTX pumps to consolidate the replacement pump market and allow energy efficient pumps to be fitted where space is an issue.
- Provides three speeds for multiple applications such as perfect flow rate for spa jets, water features, backwashing your filter and filtration of your pool and spa.
- Significant Noise Reduction
  - Is 6dBA lower than conventional pumps
  - A reduction of 3dBA halves the audible noise
  - A 6dBA reduction is half the noise of a conventional pump halved again
- Significant Reduction of Carbon Emissions
- Significant Reduction in Running Costs
  - At low speed runs at 430W approx
  - This is a 66% reduction in running costs

## Installation

1. Plumb pool suction into inlet of pump.
2. Ideally provide 300mm of pipe between riser and pump inlet.
3. Leave adequate clearance at back of pump to provide ventilation for cooling.
4. Plumb out of pump outlet to inlet of filter.

### Installation Guidelines

- Design Filtration and Hydraulic system to allow for 280 lpm @ 8 metre head.
- Use minimum of 50mm high pressure PVC plumbing.
- Use 45 degree bends instead of 90 degree elbows where possible.
- All fittings in 50mm.
- Minimise changes of direction and use of elbows.
- All multiport valves, chlorinators and heaters in 50mm plumbing.
- If possible, use large cartridge filter (200Sq Ft or more) to reduce friction loss.
- Keep equipment as close to pool as possible.
- Attempts should be made to keep equipment within 10 metres of pool.
- Suitable for use with 600mm and 700mm sand filters (RX280, RX360, FG604,705,).

# Viron P280 Vari Speed Pump

## Operation

1. Plug pump into power supply (GPO, Sanitiser or Control System).
2. Fill the lint pot with water to assist with priming.
  - This should be done each time the lid is removed from the lint pot.
  - The basket in the lint pot should be checked periodically and emptied of debris.
3. Turn power supply on.
  - Pump will start in HIGH speed.
  - This allows the pump to prime and expel any air in the system.
  - Beneficial for backwashing sand filters as the consumer does not have to remember to switch to HIGH speed since it automatically starts in this position.
4. Select preferred filtration speed.
  - This will typically be LOW speed.
  - Once selected pump will always revert to pre-selected speed on start up after 5 minutes on HIGH speed.
5. Have you installed a Genus IV Control System? If so.....
  - You can change the speed of the pump from your Genus touch pad
  - Select spa mode and the pump will change to HIGH speed
  - Select your desired speed for filtration from the Genus touch pad

## Other Information

- Effects of Changing Motor Speed – The Pump Affinity Laws explain the effects changing a motors speed has on water flow, pressure and power consumption.

Below is a summary of these factors at each of the 3 optional speeds.

Speed	Flow lpm	Pressure	Power
High 2850 RPM	280 lpm	8 metres head	1100 watts
Medium 2410 RPM	220 lpm	7.2 metres head	695 watts
Low 2000 RPM	180 lpm	5.85 metres head	427 watts

# Viron P280 Vari Speed Pump

## Other Information

- **Why 2000 RPM?**
  - Using a DC motor incorporating 20 rare earth magnets instead of an AC motor with 2 poles allows us to select any motor speed we like.
  - We chose 2000 RPM as pump affinity laws state that at this speed we will achieve a flow rate of 180lpm.
  - This flow rate is important to ensure we maintain capability to drive several components of the swimming pool. Including the skimmer, filter, salt chlorinator and gas heater.
  
- **How does the reduction in flow affect the system?**
  - Historically swimming pools have been driven by pumps ranging from 1 to 2 horse power, achieving flow rates of 300 to 550lpm. Due to salt chlorinators being sized on the provision that they will be operated for 8 hours a day these pumps in most cases have always provided well above required turnover rates.
  - Take a 60,000 litre pool with a BX1.5 turning over 440lpm. Operating for 8 hours a day this pool will be turned over 3.5 times per day. This is excessive and costly to the consumer, approximately \$847 per year.
  - Take the same pool with a P280 installed. We achieve 1.6 turnovers per day, operating for 8 hours per day. This satisfies your swimming pool requirements. Our operating costs are now approximately \$155 per year.
  
- **What if the pool is larger than 60,000 litres?**
  - With a larger pool the solution is easy. Run the pump for longer and still benefit in the cost savings. A 100,000 litre pool running a BX2.0 eight hours a day with a flow rate of 540lpm will turn that pool over 2.6 times per day and cost \$1,062 per year.
  - Take the same pool with a P280 installed. We achieve 1.6 turnovers per day, operating for 13 hours per day. Again we have satisfied requirements and reduced our operating costs to approximately \$252 per year.
  
- **There are other advantages of running the pump longer**
  - Pump is quiet allowing for longer operation in areas closer to homes.
  - Skimming for longer preventing debris hitting the pool floor.
  - Sanitising longer providing a more stable and consistent level of sanitiser.
  - Provides the option of downsizing the salt chlorinator.
  - Provides the option of reducing the salt chlorinator's output therefore extending its overall life expectancy.

