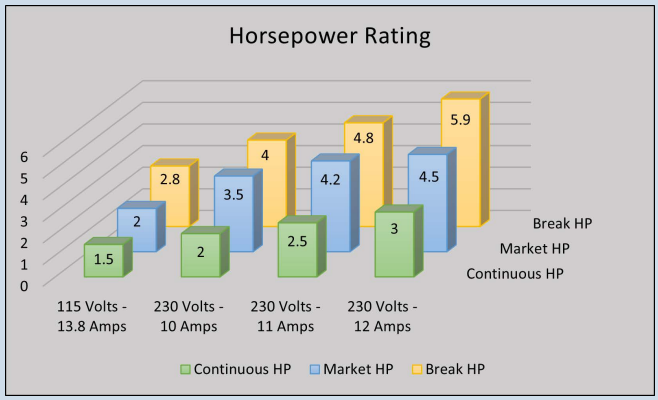
Jet Pressure vs. Horsepower vs. Pump Count

Do not be fooled into believing if you have more pumps, you have more jet power. That is far from the truth. One must consider the pump rating, plumbing of both the pump and jets, pump position and pump type. Is there an additional low speed pump for filtration only? Is that counted in the total number of pumps on the unit leading to confusion that a filtration pump delivers jet power? Are there diverters and air controls on the unit? These controls allow the user to effectively "divert" pump power to a bank of jets for added pressure leaving other jets with no power, air controls increase / reduce air mixed with jet water action to personalize the hydromassage experience.

Understanding Horsepower Rating



There are many ways to measure the performance of spa pumps. The most common reference in the spa industry is horsepower (HP), which can be misleading.

Many companies use an inflated "break horsepower" to designate their pump capacity, which does not provide an accurate measurement of performance. Break HP measures the initial surge of horsepower at start-up and is the highest motor power measured. PDC Spas® publishes two horsepower ratings, break horsepower and continuous duty horsepower. The higher number is "break horsepower" and rates the maximum power of the motor and pump at start-up. The lower number is "continuous duty horsepower" and rates the motor and pump at its normal operating power, again, typical of real life usage. Keep this in mind when determining the actual power your spa delivers and ask the question ; are the specifications in break or continuous duty horsepower. Focus on the total continuous duty HP as an accurate measurement of the jet pressure delivered in normal usage, not the number of pumps.

Filtration Pump or Circulation Pump

For marketing purposes and to increase the total number of pumps on a hot tub or swim spa, some manufacturers included a 24 hour circulation pump. These pumps are typically very small—1/15 HP is common. PDC Spas' filtration system utilizes a two-speed pump. At slow speed, the pump operates the filtration system more efficiently and at a lower cost that a 24 hour circulation pump. On high speed, the pump delivers jet pressure. In addition, with the PDC Spas® design, there is not an additional pump to service and maintain.

Accurate Power Measurement

PDC Spas® refers to the amperage rating of a pump to most accurately determine the power without the confusing HP calculation. Manufacturers and retailers are able to provide that rating for the most accurate calculation of a pump's performance.

When understanding HP claims, take into account the break HP, continuous duty HP, jet and manifold assembly. Amperage is your best indicator of pump performance. For any service needs, confirm the pump is replaced based on amperage, not HP, to avoid placing a full rated pump on an over-rated system.