

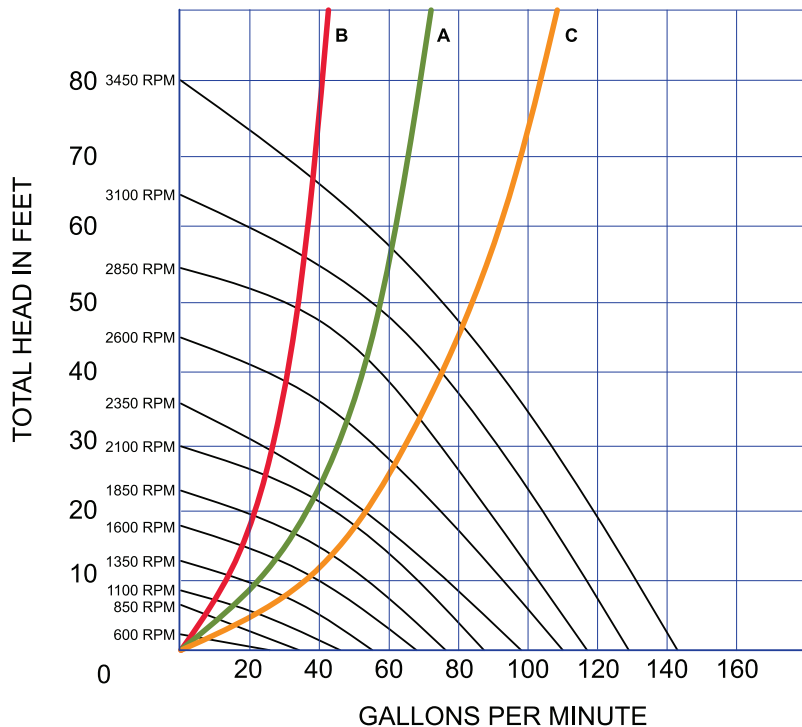


**Variable Speed
Pool and Spa Pumps**

PS165VSP- VARIABLE SPEED PUMP



- High performance, medium head variable speed pump.
- Self priming pump. Motor will run for 3 minutes at 3450rpm. After priming mode is complete, pump will start at the user programmed speed.
- Robust mechanical shaft seal allows pump to accidentally run dry for up to 1 hour.
- Easy to program variable speed controller complete with a built in 24 hour timer. Allows up to 3 program modes; cleaner cycle, low rpm filtration cycle, high speed or off cycle. Less than 5 minutes to program.
- Override button for full pump control without interrupting 24 hour program cycle. 24 hour program runs invisibly in the background and resumes once override function is complete.
- Programming will stay intact during power outage. Pump will automatically resume operation at beginning of the program when power is restored.
- Built-in freeze protection, runs pump at 2600rpm for 8 hours when ambient drops below 39°F.
- Compatible with most major automation controllers. See I/O manual for wiring instructions.
- **Remote Controller (optional):** Same controller used on the PS270VSP. View advanced diagnostic information, remote mount controller. Ability to perform advanced programming. Uses RS485 connection.
- **Limited Warranty:** 2 years from date of installation. See actual warranty.



RPM	MAX POWER CONSUMPTION
3450	1500W
3100	1175W
2850	930W
2600	720W
2350	540W
2100	395W
1850	280W
1600	195W
1350	130W
1100	80W
850	45W
600	35W

B, A, C, and D represent average flow rates with the pipe diameter

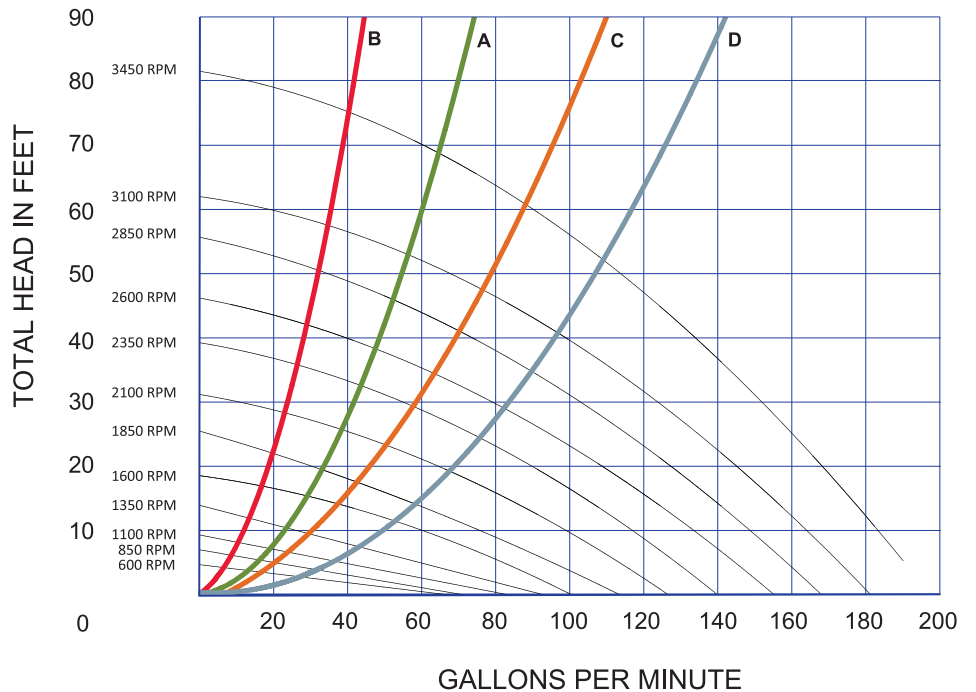
- B = 1 1/2" Pipe
- A = 2" Pipe
- C = 2 1/2" Pipe
- D = 3" Pipe

PS270VSP- VARIABLE SPEED PUMP



- High performance, medium head variable speed pump.
- Self priming pump. Motor will run for 1 minute at 2600rpm (*programmable*). After priming mode is complete, pump will start at the user programmed speed.
- Robust mechanical shaft seal allows pump to accidentally run dry for up to 1 hour.
- Easy to program variable speed controller complete with a built-in “real time” clock. Allows up to 3 program modes; cleaner cycle, low rpm filtration cycle, high speed or off cycle. Less than 5 minutes to program.
- Programming will stay intact during power outage. Pump will automatically resume operation when power is restored.
- Built-in freeze protection, runs pump at 2600rpm for 8 hours when ambient drops below 39°F (*programmable*).
- View diagnostic fault codes to help with trouble shooting.
- Controller can be remotely mounted away from pump. Uses RS485 connection.
- Ability to view motor speed and power in real time.
- Adjust motor speeds in 25rpm increments.
- Adjustable screen contrast.
- Power saver override button, runs on low speed. High speed override button for cleaning and service.
- **Limited Warranty:** 2 years from date of installation. See *actual warranty*.

RPM	MAX POWER CONSUMPTION
3450	2400W
3100	1780W
2850	1400W
2600	1075W
2350	800W
2100	590W
1850	420W
1600	290W
1350	190W
1100	120W
850	70W
600	40W



verage system curves for pools
er mentioned below.

Pipe
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Pipe
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HOW A VARIABLE SPEED PUMP SAVES YOU MONEY

Work Smarter, Not Harder

The Raypak Professional series VS pumps allow you to tailor fit your pump to your pools requirements. No longer are homeowners locked into a one size fits all pool pump. Your service technician can adjust the Raypak pump to run at a lower speed for a longer length of time, allowing you to save BIG money while your pool stays sparkling clear. It can also be set to run at higher speeds for your automatic pool cleaner then dropping to a low speed for the remainder of the filtration cycle. Below is a simple explanation that shows you how a Raypak VS pool pump really can save you money!



Goal: Completely filter the total water volume in the pool every 24 hours (1 turn).

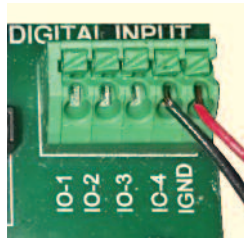
Pool Gallons: 30,000

kW/hr Cost: 0.20

Pump type	Pump GPM	Pump GPH	Hours for 1 turn	Pump RPM	kW per hour	Total kW per day	Cost per day	Cost per year
1HP Single Speed	55	3300	9.09	3450	1.35	12.27	\$2.46	\$895
Variable Speed	32	1920	15.63	1850	0.28	4.38	\$0.87	\$319
Savings per year								\$576

1HP pump takes just over 9 hours for 1 turn using 1.35kWh at a cost of \$2.46 a day. Raypak VS pump takes just over 15 hours for 1 turn using .28kWh at a cost of \$0.87 a day. The Raypak VS pump runs just under **twice as long**, but at **1/5th the cost per kWh!**

INSTALLATION FLEXIBILITY



3rd Party Remote Compatible

The Raypak Professional series VS pumps can communicate with most 3rd party remote systems. The pump comes with input ability for up to 4 separate channels. Also standard is an RS485 connection.

Optimized Performance with Raypak Heat Pump Pool Heaters

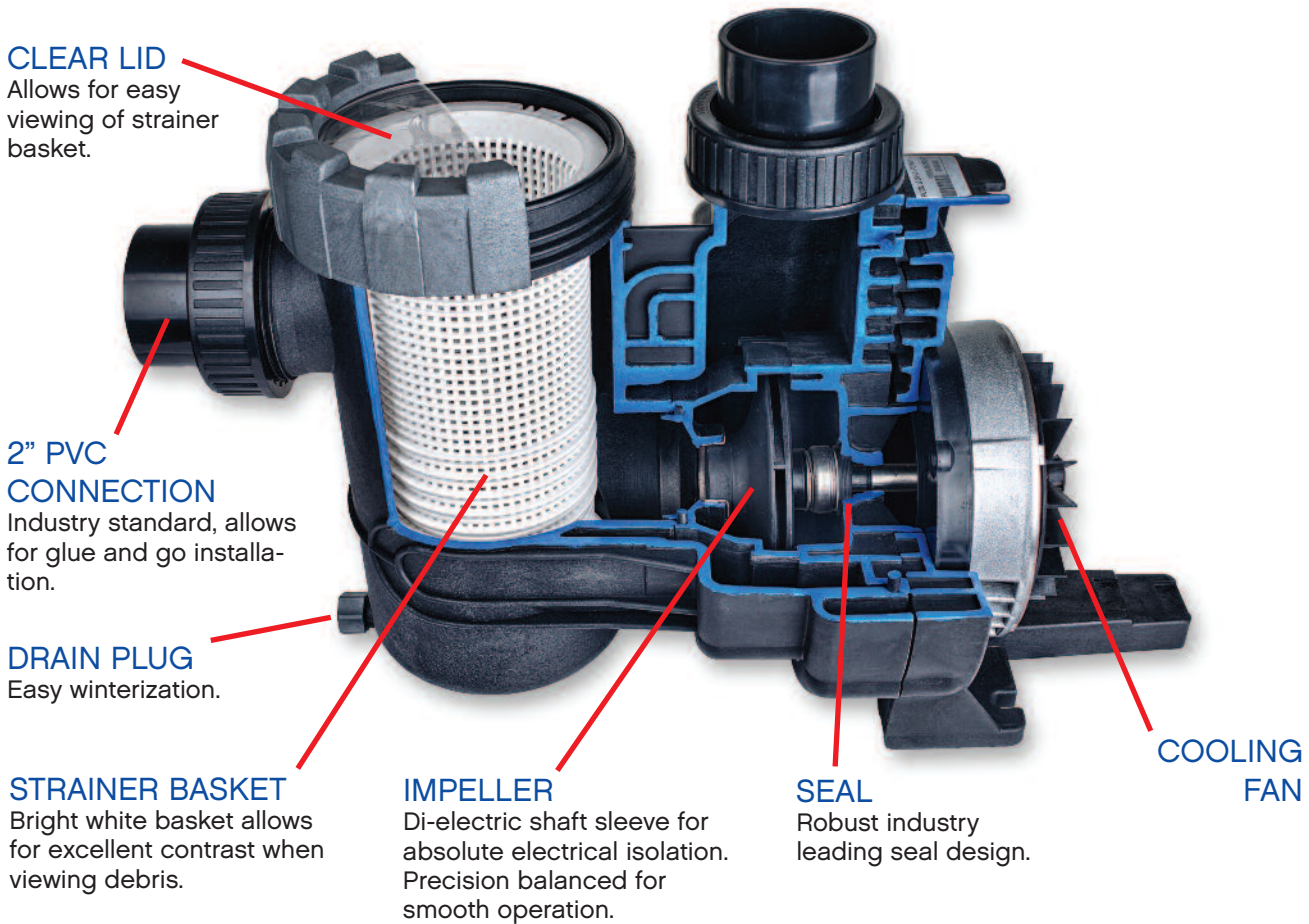
Enjoy hassle free connectivity with current Raypak analog and digital heat pumps. If you don't have a remote system to control your heater and pump, the Raypak heat pumps have the ability to let the pump know when there is a call for heat and turn the pump on to the proper heating speed for maximum energy savings.



2 Year Warranty- Parts and Labor

As with all Raypak products, we stand behind what we sell. We back all of our Professional series pumps with a 2 year parts and labor limited warranty for both residential and commercial applications. Even the seal is covered for normal wear and tear. (See *actual warranty for details.*)

THE HEART AND SOUL OF THE PROFESSIONAL PUMP



IT'S THE LITTLE DETAILS THAT MAKE A BIG DIFFERENCE

Oversized Mechanical Shaft Seal

The Raypak Professional series pumps utilize a heavy duty shaft seal with an industry leading design and the highest quality materials. The Achilles heel of most swimming pool pump designs is an unforgiving main shaft seal. Run it dry and the wet end is lost. With the Raypak Professional pump, it can withstand dry running longer than any other pump. This built in forgiveness allows the homeowner and the dealer peace of mind. In the event a seal would ever need replacing, they are readily available and priced equal to other pool pump seals.

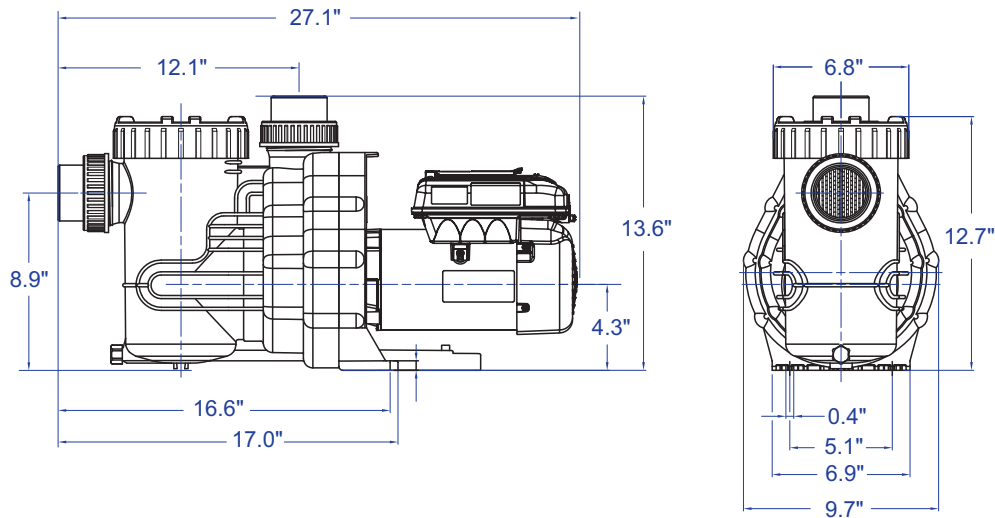


RAYPAK SEAL

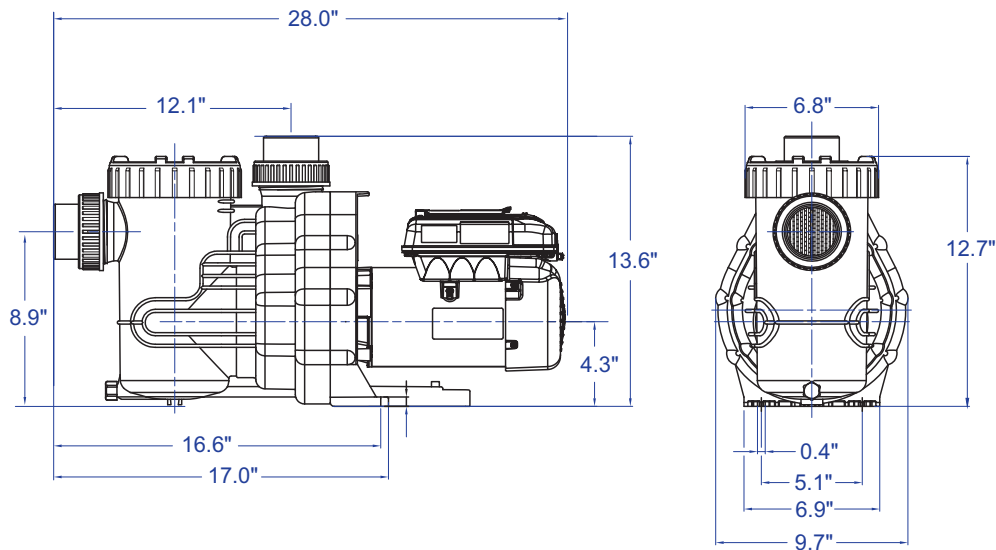
Technical Data

Professional Pool Pumps

PS165VSP - 1.65THP Variable Speed Pump



PS270VSP - 2.70THP Variable Speed Pump



Model	THP	Volts	Amps	Water Connection	Shipping Weights (lbs)
PS165VSP	1.65	208-230	11.0	2"	41
PS270VSP	2.70	230	10.5	2"	52