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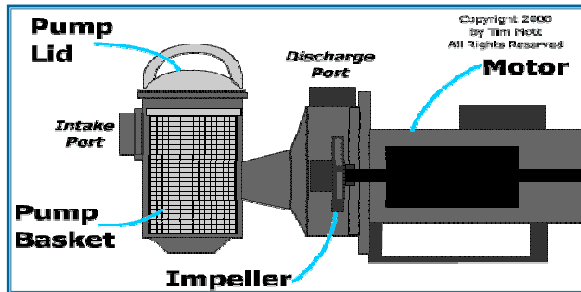


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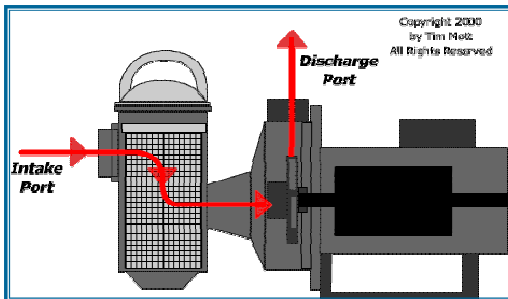
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How does my pump work?

The circulation equipment of your pool-the PUMP (circulation) and the FILTER (filtration) constitute what is known as your pool equipment. On the front of the pump you have a pump trap which has a basket that traps small debris and keeps it from clogging the pump. The pump body is where a "fanblade-like" impeller sucks in the water



and forces it out the top of the pump. The pump motor is what drives the pump. The motor is air cooled while the pump is by its very nature water cooled. A pump has a suction side and a discharge side. The suction side of the pump



draws water out of the pool. The water is then transferred to the discharge side of the pump, where it is forced through the filter for cleaning (and perhaps a heater and an automatic chemical feeder) and sent back into the pool.

The front part of the pump. The pump housing is covered by a lid. The pump housing usually contains a nameplate that contains all the pertinent information about the pump itself. There is also a drain plug (or perhaps 2 drain plugs) threaded into the bottom of the pump housing. *The pump housing and the motor are collectively called the pump.*

The motor operates the pump housing, which has a suction side and a discharge side. Located on the pump housing; the nameplate contains all the pertinent information about the pump, such as:

- Manufacturer
- Model

Sizing your new heating systems

Each pool and home is unique. The size of the heater is based on several factors, including: the size and shape of the pool; pool shading (i.e trees, screen enclosure); geographic location; swimming season and pool temperature desired; windy conditions; and for solar, the direction of the roof (south, east, west or flat). The size of the heater will determine the temperature, swimming season, and length of time to heat the pool. It is very important to properly size the heater for good performance.

Gas pool heaters are rated by Btu (British thermal unit) output. Outputs range from 75,000 Btu to 450,000 Btu.

Heat pump pool heaters are rated by Btu output and horsepower (hp). Standard sizes include 3.5 hp/75,000 Btu, 5 hp/100,000 Btu, and 6 hp/125,000 Btu.

Calculating Approximate Size

To calculate an approximate heater size for an outdoor swimming pool, follow these steps:

1. Determine your desired swimming pool temperature.
2. Determine the average temperature for the coldest month of pool use.
3. Subtract the average temperature for the coldest month from the desired pool temperature. This will give you the *temperature rise* needed.
4. Calculate the pool surface area.
5. Use the following formula to determine the Btu/hour output requirement of the heater:

(Pool area multiplied by temperature rise multiplied by 12)

The chart below is an easy way to size a swimming pool heater. Simply determine the surface area square footage and the desired temperature. Then refer to the chart for the amount of BTUs required to heat up your swimming pool. For example: A 400 sf pool with a temperature of 20 degrees. The heater output per hour needs to be at least

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Continued on page 2 (Heaters)



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Acqua Nita Services, Inc. specializes in customer care, offering a variety of services to cater for the diverse needs of our customers. Our service technicians are NSPF Certified. Acqua Nita Services, Inc. is a member of Independent Pool & SPA Service Association, Inc. (IPSSA). Acqua Nita Services, Inc. is licensed by the County of Broward (CC# 03-11058-SPX) to service / maintain your pool and also registered / licensed with the state of Florida (RP25254953).

Swim in warm water

Jump right in anytime

Warm night swims

aquatherm



Pump / Motors (Continued from Page 1)

- (if applicable), a Model Number
- Horsepower
- Speed (single or dual)-most pool pumps are single (high) speed
- Electrical Specifications (110 volt or 220 volt)

This is valuable information when you need to report a service call. If the motor is the original motor that came with the pump, all this information will also be listed on a sticker on the motor. However, if it is a replacement motor, then the information on the sticker will only pertain to that replacement motor, and not the entire pump itself. The fact that motors are typically replaced more often than the entire pumps themselves is the reason that manufacturers also put the information on a nameplate on the pump housing.

The back part of the pump. The motor converts electricity into the mechanical movement of the water. Does that sound confusing? Basically, the motor is what powers the overall pump to circulate water; when you shut "off" the equipment, you are really shutting "off" the motor. At times, the pump will lose its prime (ability to circulate-draw out and send back in-water). One example is when water level in the pool is not sufficient (half way up the skimmer). When this happens "OPEN" the main drain valve ONLY and shut down the "SKIMMER" valve. Do not let the pump run for more than 1 ½ minutes when attempting to prime. If it has been close to 1 ½ minutes and the pump lid is beginning to fog up, then the water remaining in the pump housing (under the lid) is getting too hot. This heated water (due to friction) **can destroy your pump seal and cause the pump to leak.** If it has been close to 1 ½ minutes OR if you see fog on the lid, then the pump is not priming. **SHUT "OFF" THE EQUIPMENT.**

Sizing Heaters (Continued from Page 1)

223,700 BTUs to heat your swimming pool in 24-hours.

Pool Size (sf)	10 Degrees	15 Degrees	20 Degrees	25 Degrees	30 Degrees
200	55,900	83,800	111,840	139,800	167,760
300	83,880	125,820	127,700	209,700	251,640
400	111,650	167,775	223,700	279,625	335,550
500	139,810	209,715	279,620	349,525	419,430
600	167,770	251,655	335,540	419,435	503,310
700	195,720	293,595	391,460	489,325	587,190
800	223,690	335,535	447,380	559,225	671,070
900	251,650	377,475	503,300	629,125	754,950
1,000	279,610	419,415	559,220	699,025	838,830

Keep in mind that a Thermal Pool Cover is recommended for all heating systems. Heating a pool without a cover is like heating a house without a roof. . . . The heat just goes right out the top. Without a pool cover, the cost of operating a Heat Pump or Gas Heater is doubled, and a Solar Heater's effectiveness is dramatically decreased. If a pool cover is not being used, the size of the heater must be increased by 100%.

For a more detailed report on the heater requirements of your pool please contact Acqua Nita Services, Inc.