



[Above ground swimming pool pumps](#) are designed for installation below water level, or what we call flooded suction, and are not meant to lift water vertically.

Pool pumps are the 'heart' of the above ground pool circulation system. And like your own beating heart, cardiac trouble is cause for alarm and immediate concern.

That is why above ground pool pump problems must be urgently addressed. With reduced flow rate, or a complete loss of circulation, your pool filter shuts

down, and pool chemicals become overwhelmed by a rapid build-up of solids in the water.

How to Choose an Above Ground Pool Pump

1. Match the pump output (in GPM) to your pool filter design flow rate.
2. Above ground pool pumps have standard 1.5" threaded or union connections.
3. 48Y Frame motors, 1/2hp to 2hp, for above ground pools from 3000 to 30000 gallons.
4. The best above ground pump is often an exact model and hp replacement.



Don't install a bigger pump than your filter can handle. If a new aboveground pump has no power cord, you can reuse the [pump cord](#) with a new pump, as long as it's in good shape.

How to Plumb an Above Ground Pool Pump

1. For hoses, attach 1.5" smooth hose fittings into pump with Teflon tape.
2. Clamp skimmer hose from pool to inlet port (in front of pump).
3. Clamp filter hose to outlet port (on top of pump).
4. For hard pipe, use 1.5" PVC male threaded adapters (MTA) fittings.
5. For poly pipe, use 1.5" gray barb hose fittings and clamps.



Wrap [hose fitting](#) threads 3-5 times with Teflon tape (in a clockwise direction) and thread into above ground pumps and filter valves. Go Hand Tight, plus 1 turn Only. Overtightening unions or adapters into pumps and filters can cause stress cracks.

How to Connect Above Ground Pool Pump to Filter

1. Attach 1.5" threaded hose fittings into pump outlet and filter inlet with Teflon Tape.
2. Connect filter hose from pump outlet into filter inlet (marked PUMP on valves).
3. Connect pool return hose to filter outlet (marked RETURN on valves).



The pump outlet or discharge side of the pump is located behind the basket, in the center of the pump, with vertical hose fitting connection. The pump inlet, where the water enters the pump is on the front of the basket, with a horizontal connection.

How to Replace an Above Ground Pool Pump

1. Shut off pump and close isolation valves on either side of the pump.
2. Select a replacement pump of the same hp and flow rate.
3. Match the pump flow rate to your filter design flow rate.
4. Re-use your pump hose fittings and power cord on new pump.
5. Install on a solid, elevated base, below the pool water level.



Wrap 1.5" hose fitting threads with 3-5 revolutions of [Teflon tape](#) (in a clockwise direction) and thread into above ground pumps and filters, hand tight, plus 1 turn only. Overtightening unions or adapters into pumps and filters can cause stress cracks.

How to Clean an Above Ground Pool Pump Basket

1. Shut off pump and close isolation valves on either side of the pump.
2. Remove threaded pump lids in a counter-clockwise direction.
3. Remove pump basket by pulling on handle or gripping on the inside edges.
4. Bang out debris from basket, and replace into the pump.
5. Replace lid tightly, open the isolation valves and test pump.



Keep your pump lid operating smoothly and prevent air leaks by regularly cleaning with a soft rag and lubricating with a Teflon [pool lube](#). Don't use Vaseline, which will eat the rubber.

How to Wire an Above Ground Pool Pump

1. Shut off power to the pump timeclock or switch, by flipping the circuit breaker.
2. Connect the bare copper bonding wire to the brass motor lug.
3. Remove the rear cover of the new above ground pump motor.
4. Remove the cord connector from the old motor, and screw into the new motor.
5. Push the 3 wires of the power cord through the connector and tighten.
6. Connect the green wire to the ground screw, and the other two wires to the large brass screws or spade terminals, labeled L1 and L2 (either wire).



Above ground pool pumps only accept 115V. Do not wire with 230V, they are meant to plug into a GFCI outlet with a grounded 3-prong plug. Economize and schedule pump runs with a [plug-in pump timer](#).

How to Prime an Above Ground Pool Pump

1. If below water level, a pump should be gravity fed and always full of water.
2. If above water level (not recommended), manual priming may be required.
3. Close isolation valves on either side of pool pump.
4. Remove pump lid and fill basket and incoming hose with water.
5. Replace lid tightly, open valves and turn pump on.
6. If pump does not catch prime in 60 seconds, repeat steps 3-5.



Be sure [pump lid o-rings](#) are clean and lubed with a Teflon pool lube. Seal any air leaks on the incoming hose or hose fitting with Teflon tape or other sealant. Check for blockage in the hose or impeller if pump priming problems continue.

How to Get to an Above Ground Pump Impeller

1. Close isolation valves on either side of pool pump.
2. Remove the nuts or screws on the front of the impeller housing or 'wet end'.
3. Slide the motor end back, and out of the pump, separating into two.
4. Inspect impeller for clogs; vanes can be reamed with wire or a small rod.
5. Loosen bolts on rear of motor only to remove the pump housing, or seal plate.
6. Remove the impeller only to replace the shaft seal or motor.



To remove an impeller, hold the motor shaft steady with a wrench on the slotted portion of the shaft, at the rear of the motor, behind the centrifugal switch.

Many impeller clogs can be fixed by pulling out the [pump basket](#) and reaching into the eye of the impeller with a small screwdriver or tool to patiently dislodge the bulk of the material, scooping it out by hand.

How to Replace an Above Ground Pump Shaft Seal

1. Use the correct mechanical shaft seal that fits your above ground pump.
2. Unplug pool pump, or otherwise cut all power to pump.
3. Close isolation valves, and/or plug the skimmer and return lines.
4. Remove the nuts or screws on the front of the impeller housing or wet end.
5. Slide the motor end back, and out of the pump, separating into two.
6. Hold the motor shaft steady with a wrench on the slotted shaft at the rear of the motor, then grip the impeller firmly and twist off, in a counter clockwise direction.
7. Pull the spring seal half from the impeller and dig out the round ceramic part from the pump housing or seal plate, and replace with new seal in the same orientation.
8. Tighten impeller back onto shaft, all the way until it stops turning.
9. With the sealing o-ring in place, reconnect the pump housing together tightly.
10. Open isolation valves, turn power on and test operation.



[Pump shaft seals](#) are two pieces, the spring half and the ring half. The spring half has a hard plastic side that makes contact with the ceramic face of the ring half.

Above ground pool pump problems will happen, and you've got to be ready to respond quickly to keep your pool water filtered effectively. If your pool pump is unable to pump water, add extra chlorine to the pool and brush daily to keep the water from turning green. You can hold a pool for 1-2 weeks in this manner, depending on the outside daily temperature.

For more assistance with your above ground pool pump troubleshooting, give us a call or send us an email with details of your difficulties. We're glad to help you with any type of pool pump problem!