



## Submersible **UTILITY PUMPS**

### INSTALLATION & MAINTENANCE GUIDE

ITEM#	PRODUCT DESCRIPTION
660021	423 GPH
660022	568 GPH
660024	873 GPH
660025	976 GPH



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This symbol indicates “**WARNINGS**” that are essential in order to protect against injury to people or damage to equipment.



This symbol indicates “**NOTES**” that are specific instructions on how to operate, control, adjust or maintain the units.



This symbol indicates “**TIPS**” that are intended to offer helpful advice for a better user experience.

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## Thank you for purchasing an AquaticLife® Submersible Utility Pump.

We know you value quality and innovation and will be pleased with this product’s performance.

We encourage you to take a few minutes to become familiar with this manual and note items that apply to your particular model. For additional information, please visit [www.aquaticlife.com](http://www.aquaticlife.com).



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# SAFETY INSTRUCTIONS



## WARNING

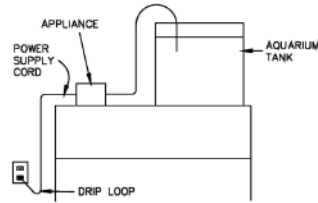
TO GUARD AGAINST INJURY, BASIC PRECAUTIONS SHOULD BE OBSERVED, INCLUDING THE FOLLOWING:

- A) **READ AND FOLLOW ALL SAFETY INSTRUCTIONS.**
- B) **DANGER** – To avoid possible electric shock, special care should be taken since water is employed in the use of aquarium equipment. For each of the following situations, do not attempt repairs by yourself; return the appliance to an authorized service facility for service or discard the appliance:
- 1) If the appliance falls into the water, DON'T reach for it! First unplug it and then retrieve it. If electrical components of the appliance get wet, unplug the appliance immediately. (Non-immersible equipment only)
  - 2) If the appliance shows any sign of abnormal water leakage, immediately unplug it from the power source. (Immersible equipment only)
  - 3) Carefully examine the appliance after installation. It should not be plugged in if there is water on parts not intended to be wet.
  - 4) Do not operate any appliance if it has a damaged cord or plug, or if it is malfunctioning or has been dropped or damaged in any manner.
  - 5) To avoid the possibility of the appliance plug or receptacle getting wet, position aquarium stand and tank to one side of a wall-mounted receptacle to prevent water from dripping onto the receptacle or plug. A "drip loop," shown in the figure below, should be arranged by the user for each cord connecting an aquarium appliance to a receptacle. The "drip loop" is that part of the cord below the level of the receptacle, or the connector if an extension cord is used, to prevent water traveling along the cord and coming in contact with the receptacle. If the plug or receptacle does get wet, DON'T unplug the cord. Disconnect the fuse or circuit breaker that supplies power to the appliance. Then, unplug and examine for presence of water in the receptacle.
- C) Close supervision is necessary when any appliance is used by or near children.
- D) To avoid injury, do not contact moving parts or hot parts such as heaters, reflectors, lamp bulbs, and the like.
- E) Always unplug an appliance from an outlet when not in use, before putting on or taking off parts, and before cleaning. Never yank cord to pull plug from outlet. Grasp the plug and pull to disconnect.
- F) Do not use an appliance for other than intended use. The use of attachments not recommended or sold by the appliance manufacturer may cause an unsafe condition.
- G) Do not install or store the appliance where it will be exposed to the weather or to temperatures below freezing.
- H) Make sure an appliance mounted on a tank is securely installed before operating it.
- I) Read and observe all the important notices on the appliance.
- J) If an extension cord is necessary, a cord with a proper rating should be used. A cord rated for less amperes or watts than the appliance rating may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.
- K) For added safety, the appliance must be plugged into a receptacle controlled by a GFCI (ground fault interrupter) circuit breaker. Device must be properly connected to a grounded three-prong receptacle.
- L) This appliance is intended FOR HOUSEHOLD USE ONLY.
- M) This Light Fixture is required to be used over a covered aquarium. A glass top or protective barrier is required to minimize the fixture's exposure to water.
- N) **SAVE THESE INSTRUCTIONS**



## NOTE

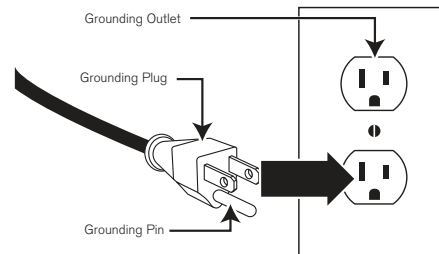
DO NOT POSITION HID LAMPS DIRECTLY OVER AQUARIUM FRAME BRACES



## GROUNDING SETUP

This appliance should be grounded to minimize the possibility of electric shock. This appliance is equipped with an electric cord having an equipment grounding conductor and a grounding type plug. The plug must be plugged into an outlet that is installed and grounded in accordance with all appropriate codes and ordinances.

This appliance is for use on a normal 120-volt circuit, and has a grounding plug that looks like the plug illustrated below.



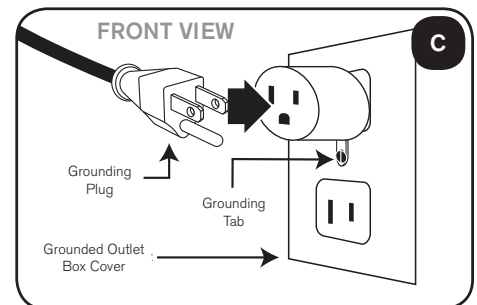
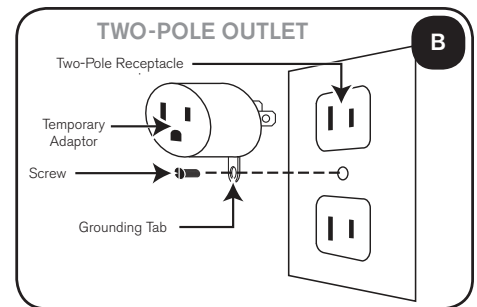
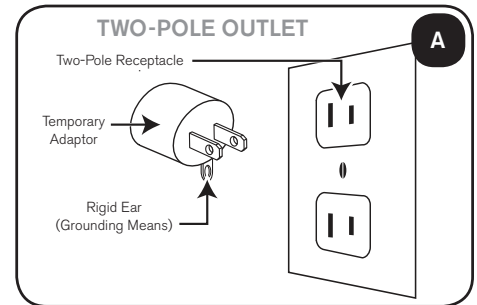
A temporary adaptor which looks like the adaptor illustrated in (A) may be used to connect this plug to a two-pole receptacle as shown in (A) if a grounded outlet is not available.

A temporary adaptor should only be used until a grounded outlet can be installed by a qualified electrician.

## GROUNDING INSTALLATION

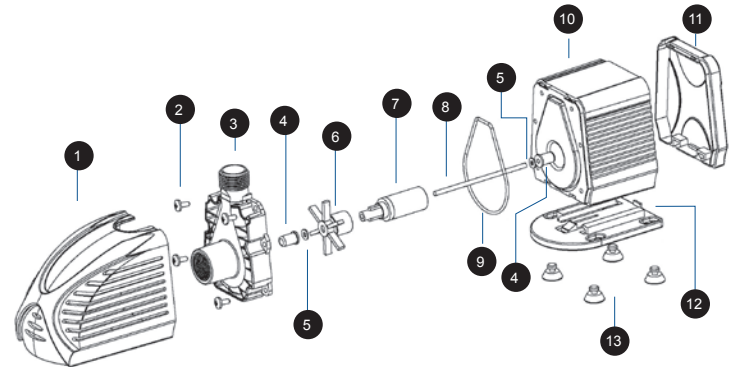
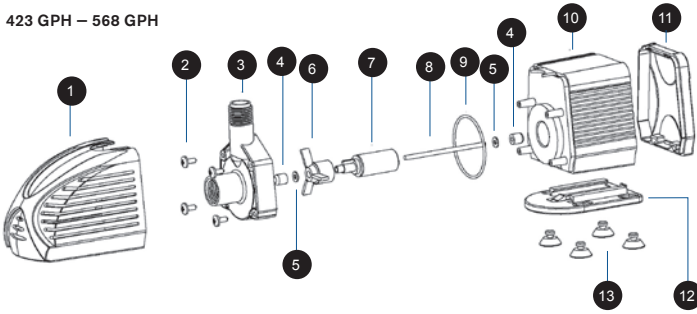
The green-colored rigid tab extending from the adaptor must be fastened to a permanent ground such as a grounded outlet box.

1. Plug temporary adaptor into two-pole outlet. (B)
2. Insert screw through rigid tab on temporary adaptor and into grounded outlet box. (C)



## PARTS DIAGRAM

423 GPH – 568 GPH



873 GPH – 976 GPH

### Parts List

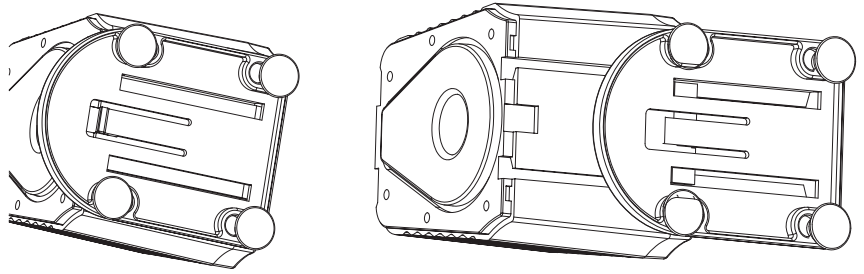
Pump Item #	Part	660021	660022	660024	660025
1	Intake Cover	470077	470077	470078	470078
2	Screws	470096	470096	470096	470096
3	Impeller Cover	470079	470079	470080	470080
4,5,6,7,8	Impeller	Blue # 470061	Green # 470066	White # 470068	Black # 470069
8	Impeller Shaft	470097	470097	470098	470098
9	O-ring	470094	470094	470095	470095
10	Pump	-	-	-	-
11	Back Plate	-	-	-	-
12	Pump Base	470081	470081	470082	470082
13	Base Feet	470083	470083	470083	470083

### Product Specifications

	660021	660022	660024	660025
Max. Flow Rate @ Pump Discharge:	423 GPH	568 GPH	873 GPH	976 GPH
Max. Pumping Height:	2.9 M (9.5 FT)	2.9 M (9.5 FT)	3.75 M (12.3 FT)	3.75 M (12.3 FT)
Discharge Size:	1/2 IN MPT	1/2 IN MPT	3/4 IN MPT	3/4 IN MPT
Intake Size:	1/2 IN FPT	1/2 IN FPT	3/4 IN FPT	3/4 IN FPT
Power Cord:	2 M (6.5 FT)	2 M (6.5 FT)	2 M (6.5 FT)	2 M (6.5 FT)
Pump Dimensions:	175 x 81 x 115 MM (6.9 x 3.2 x 4.5 IN)	175 x 81 x 115 MM (6.9 x 3.2 x 4.5 IN)	192 x 90 x 130 MM (7.6 x 3.5 x 5.1 IN)	192 x 90 x 130 MM (7.6 x 3.5 x 5.1 IN)
Voltage, Hz:	120 Volt, 60 Hz	120 Volt, 60 Hz	120 Volt, 60 Hz	120 Volt, 60 Hz

## PUMP BASE WITH FEET

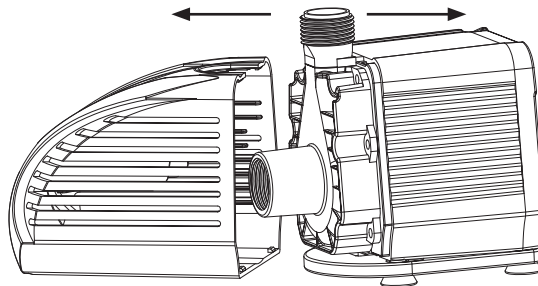
1. Slide base onto the pump until the base "clicks" into place.
2. Removal of the base allows the pump intake cover to be easily removed.



## INTAKE COVER

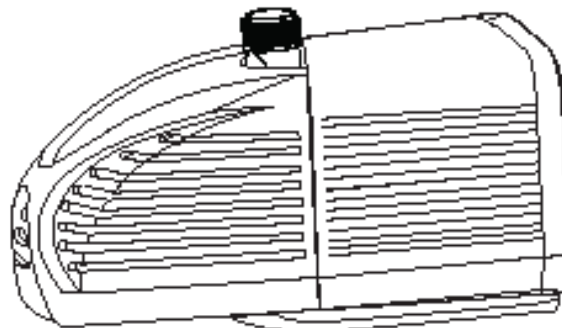
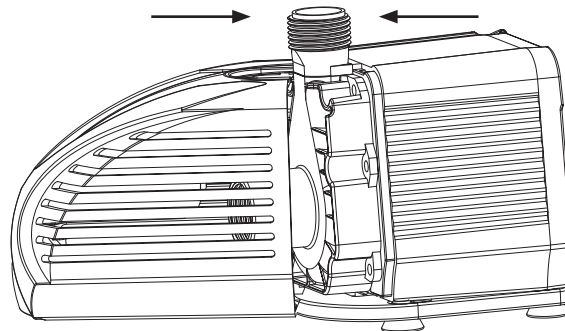
### Removal

1. Hold both the pump and the intake cover, one in each hand.
2. "Pry" open one side of the pump to remove the intake cover from the pump.



### Replacement

1. Hold both the pump and the intake cover, one in each hand.
2. Align the intake cover with the pump, insert the cover over the bottom of the pump, and press the top of the cover after the bottom is aligned.



# PUMP TUBING ATTACHMENT

## FLEXIBLE TUBING

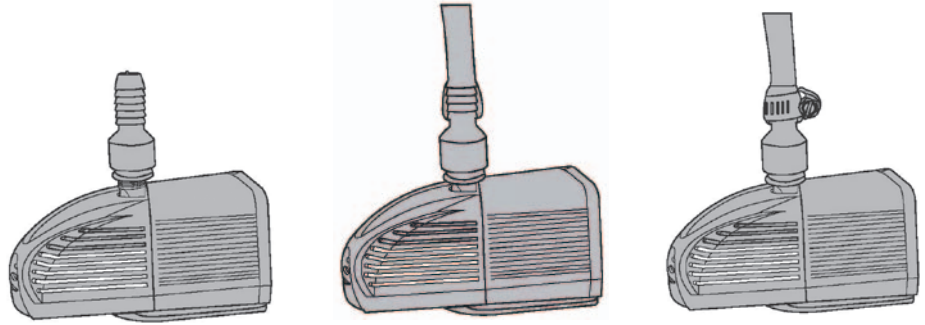
Flexible tubing is the most common method for adding a submersible pump to a filtration system. It is flexible enough to bend around corners, adjust to new situations and all around very versatile. Flexible tubing can be attached directly to the threaded discharge or attached to a hose adapter as pictured below. Flexible tubing over time will become rigid and lose its ability to "GRIP" the hose barbs – use of clamps is recommended.



**TIP:** Add a valve on the discharge of the pump so that you can control water flow and shut off the water flow if maintenance is needed.

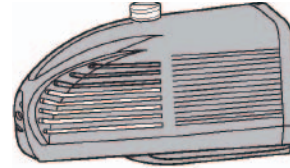
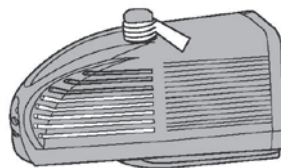
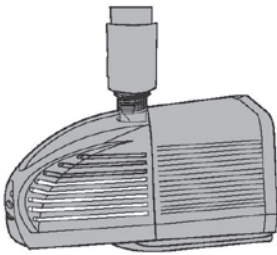


**NOTE:** Tubing clamps are recommended so that the tubing does not unintentionally disconnect from the pump.



## RIGID PIPE

Rigid pipe (PVC) is common for external plumbing requirements since the pump is "plumbed" into the line or loop. Rigid pipe is less forgiving and requires special glues and cleaners to make the connections.



**TIP:** Use small pieces of flexible tubing between the pump and rigid plumbing to reduce vibration and make it easier to remove the pump from the system.



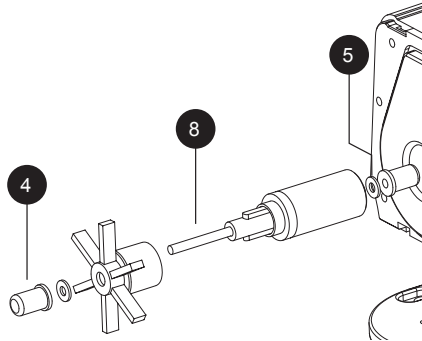
**NOTE:** It is important to use Plumbing Tape when attaching threaded components to the pump; especially when the pump is plumbed outside the sump.

Maintenance is recommended every three months. If water conditions are abnormal and there is more detritus, debris or suspended material in the water, the pump may need more frequent maintenance.

## HOUSING

Unplug the pump from electric prior to performing any maintenance on the pump. Wipe the pump with a clean moist/semi dry cloth to remove debris that may have build up during operations. The pump can be soaked in 1 part vinegar to 1 part water to help remove calcium build-up on the housing.

## IMPELLER AND IMPELLER WELL

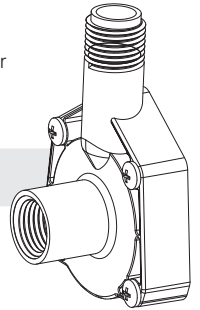


Remove the intake cover and the screws securing the impeller cover; pull the impeller cover off to expose the impeller and the impeller well. To remove the impeller, pull straight out of the well to prevent damaging the impeller shaft.

1. Impeller: remove the rubber bushing #4 and #5 from the impeller and slide the impeller shaft #8 out from the other parts.
2. Clean the impeller shaft and review to see if any wear is visible on the impeller shaft.
3. If wear is noticed replace the shaft to ensure proper water flow.
4. Wipe the impeller and impeller well to remove any build-up or debris.
5. If the impeller is coated with calcium build-up, it can be soaked in 1 part vinegar to 1 part water solution. Gently scrub the build-up after soaking for one hour.

## IMPELLER COVER

Check to make sure there is nothing blocking the intake of the impeller cover.



**MPT:** Male Pipe Thread, a standard connection type used to connect various parts to each other.

**FPT:** Female Pipe Thread, a standard connection type used to connect various parts to each other.

**Power Factor:** A measure of the effectiveness with which an electrical device converts volt-amperes to watts.

**Drip Loop:** To arrange an electrical cord so it hangs down well below the outlet before running back up again. Any water running down the cord will drip down from the loop, rather than running uphill to enter the outlet.

**Impeller:** Moving component within the pump that is actually moving and doing the work, it rotates along a horizontal shaft within the pump, using a magnet and magnetic fields.

**Maximum Pumping Height:** the vertical height a pump will attain and have a flow rate equaling zero gallons per hour.

**Thermal Switch:** a safety device that interrupts electrical power when a specific temperature is reached.



## REGISTERING YOUR PRODUCT(S) WITH AQUATIC LIFE

Register your product online at: [www.AquaticLife.com](http://www.AquaticLife.com)

### Benefits of Registraton:

#### Confirmation of Ownership

Provides a record in the event you need to contact us about your product in the future.

#### Your Safety

Allows us to contact you with important product notifications.

#### Improved Product Support

Helps us continue to tailor our products and services to meet your needs.

## LIMITED WARRANTY (UNITED STATES AND CANADA)

Aquatic Life, LLC warrants that this product (excluding lamps and media) shall be free from defective electrical components and leaks or cracks due to defects in materials or workmanship for a period of twenty-four (24) months from the date of purchase. If a defect is shown, Aquatic Life, LLC will, at Aquatic Life's sole discretion, either repair or replace the product without charge. No cash refunds will be made. This warranty is provided solely to the original consumer purchaser of the product and may not be transferred or assigned.

This warranty does not apply to damage resulting from accident, misuse, abuse, lack of reasonable care, failure to follow safety and installation instructions, use of the product with non-standard electrical service, or any other defect not resulting from defects in the electrical components of the product or defects in materials or workmanship. This warranty will not be effective unless and until the Aquatic Life product is shown to have been used in accordance with the safety and installation instructions accompanying the product.

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U.S. Mail  
Aquatic Life, LLC  
2416 W. Victory Blvd, #136  
Burbank, CA 91506

Electronic Mail: [customersupport@aquaticlife.com](mailto:customersupport@aquaticlife.com)

Aquatic Life, LLC shall be allowed a reasonable period of time to investigate any warranty claim and to perform any testing Aquatic Life, LLC deems necessary to determine the cause of the defect. This warranty shall be interpreted under the laws of the State of California.



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