

# FreshWater Pump

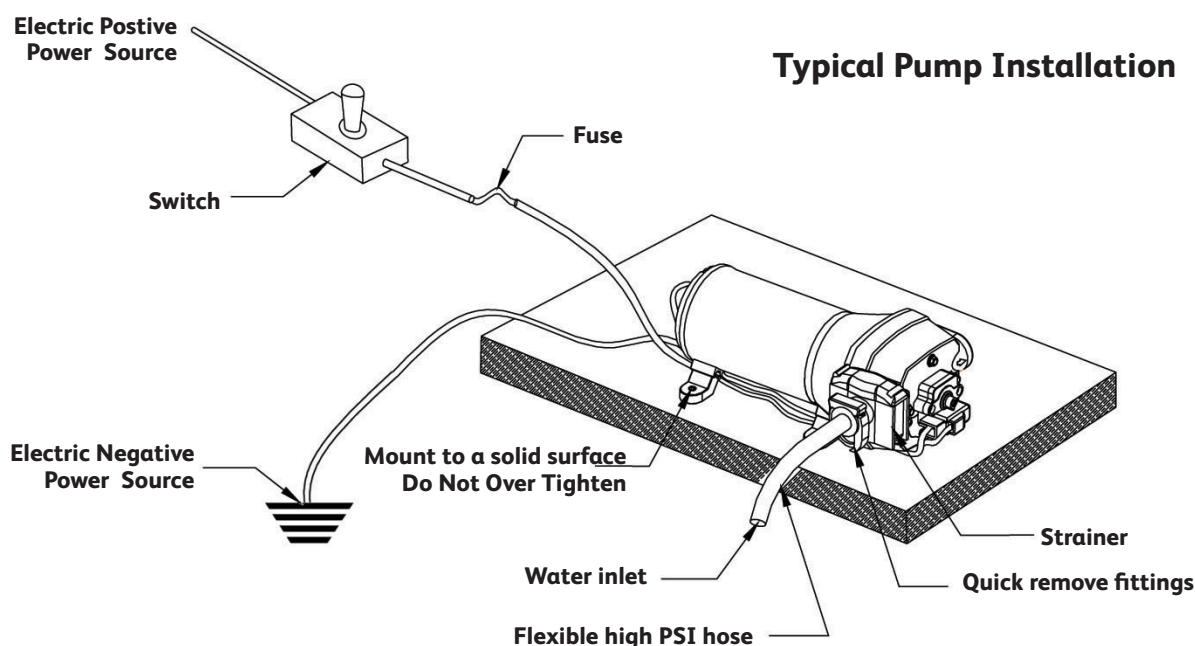
## Installation & Maintenance Manual

### Installation Preparation

The aim of the installation is to provide a quiet, easy to maintain installation with good flow and back pressure. This can be accomplished by using the following guidelines –

Follow associated marine/RV/agriculture safety guidelines if installing in a water craft including waterproof connections.

- Mount on a solid surface in an accessible location to facilitate cleaning and maintenance.
- Use flexible high pressure hose on the pump inlet and outlet. The pump ports and strainer should not be connected to plastic or rigid pipe otherwise the normal motion of the pump will cause noise and possible loosening or cracking of components.
- Use an adequate mesh strainer and hose with a minimum inner diameter of 12.5mm to reduce the risk of back pressure, cycling, low flow and noise.
- The pump is designed for intermittent use only. Do not use for running a Reverse Osmosis Filtration System. High continuous usage will shorten the life of the pump.
- Minimum power required is 20 amps with a wire size of 16 GA minimum.
- Reduce the restrictions on inlet and outlet including small diameter shut off valves, winterizing valves and elbows.



## **Mounting**

- For best performance mount the pump within 5 feet of the tank in a space of at least 1 cubic foot for ventilation.
- The pump may be mounted in any position on a solid surface and accessible for cleaning and maintenance.

## **Electrical**

- The pump works best on an individual filtered circuit protected by the fuse or breaker specified on the label.
- A switch is recommended on the positive lead.
- Use the recommended wire size (16 GA minimum). If the wire is too small it will affect the pump performance and may be a fire hazard.
- Turn off power to the pump when unattended.

## **Plumbing**

- Installation of a strainer is required to prevent debris from entering the pump.
- We recommend using a minimum of 5 inches of flexible high pressure hose to both ports.
- The pump ports and strainer should not be connected to plastic or rigid pipe and should be anchored where it meets the hard plumbing to reduce vibration.

## **Operation**

- The pump operates normally up to factory set shut off pressure.
- As the valve is opened, pressure will drop, the switch will close and full flow will be achieved again. Pump cycling (on-off-on) may occur if the valve is not open enough to allow flow.
- Lower voltage – lower flow; higher voltage – higher flow.
- It is advisable to shut the power to the pump off when unattended.

## **Maintenance**

- Normal pump maintenance is all that is required.
- Check and clean the strainer. Sanitize and winterize all plumbing hardware and fittings and check for tightness. Lack of sanitizing will cause scale build up on the diaphragm and valves and cause poor performance or premature pump failure.

There are no repair kits available.

## **Sanitizing**

- Potable water systems require periodic maintenance to keep components working properly, usually prior to storing and after a period of storage.
- Check the Owner's Manual for specific instructions.

## **Winterizing**

- If water is allowed to freeze in the system serious damage to the plumbing and pump may occur. The best solution is to drain the pump completely as follows -
- Drain the water tank.
- Run the pump until all the water has been emptied from the plumbing and then turn the pump off.
- Remove the plumbing at the inlet/outlet ports. Turn the pump on and allow it to operate until all the water has been emptied. Turn off the pump and do not reconnect the plumbing.
- Leave all valves open.
- Use antifreeze in the drains and toilets to protect against freezing traps and seals.
- Fully sanitize the system before further use.
- Check the Owner's Manual for specific instructions.

## Troubleshooting

Vibration can loosen plumbing, strainers and pump hardware. Check for loose connections.

### Pump will not start/blows circuit

Check all electrical connections, fuse or breaker, main switch and ground connection. Is there power at the switch? Bypass the main switch, does the pump operate? Check the voltage and wiring for correct size. If the diaphragm is seized or locked check for frozen water.

### Pump will not prime/stutters

Are the strainer, pump inlet/outlet clogged with debris? Is there water in the tank? Is the inlet pipe restricted or kinked? Are the valves restricted or swollen or dry? Check the voltage is correct. Check the pump housing for cracks or loose screws.

### Rapid cycling

Check restrictions in plumbing and valves. Is the water purifier/filter on a separate line?

### Pump will not shut off, runs when valve is closed

Check output plumbing, valves and toilet for leaks. Check for trapped air in outlet plumbing or pump head. Check correct voltage used. Check for loose pump head screws and drive assembly. Check the valves for debris or swollen rubber. Check pressure switch.

### Noise or rough operation

Plumbing may be loose. Check inlet plumbing for clogged strainer, kinked hose or restricted valves. Has the pump been fitted with rigid pipe? Does the mounting surface amplify noise, are the mounting feet loose or compressed too tight? Check for air in the system and bleed. Remove pump head – is the noise from the motor or pump head?

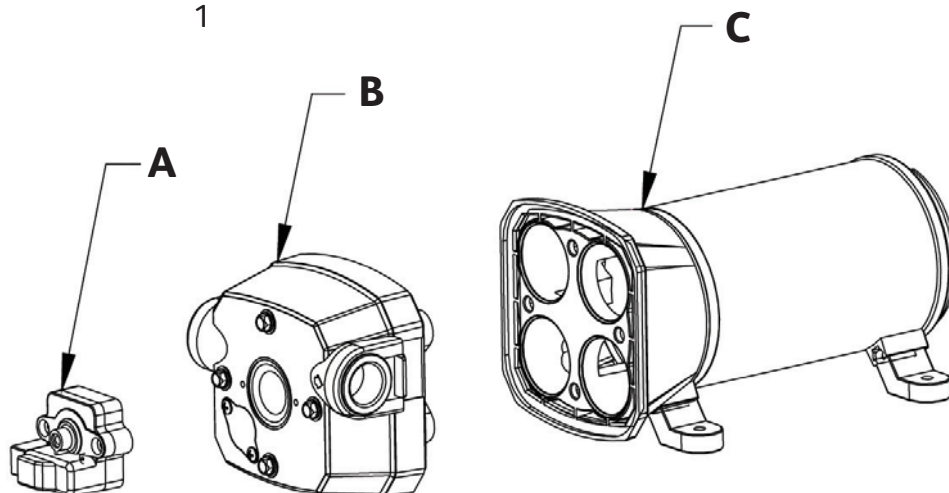
### Leaks from pump head or switch

Check for loose screws at switch, by-pass or pump head. Is the diaphragm ruptured or pinched? If the diaphragm is punctured is there water in the drive assembly?

Usually prior to storing and after a period of storage.

Check the Owner's Manual for specific instructions.

| Item | Description              | Quantity |
|------|--------------------------|----------|
| A    | Pressure Switch Assembly | 1        |
| B    | Pump Head Assembly       | 1        |
| C    | Motor                    | 1        |



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## LeeScale

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## Toilet Bowl Cleaner

## Clean & Green (12 Sachets)



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