

## 12 Volt Diaphragm Pump User Guide Manual

**Model:** XC-SP002

### **Caution:**

Please read all instructions carefully before installing this product.

This pump is not ip68 sealed and therefore shall by any means never be submerged. However the electric wire connections must not be submerged. For extra protection please insulate all joins and ends with approved insulation or shrink tapes to avoid electric shocks and fire sparks that may cause explosions or fires.

### **Security:**

- 12V diaphragm pumps can only be used for pumping clean water and non-corrosive chemicals and liquids.
- Please connect pump's black and white wire to the negative terminal (-) and white wire to the positive terminal (+).
- Make sure you use suitable size fuses.
- The wire connections must be insulated by shrink or water tight insulation tape.
- All wire connections must be outside water, unless necessary provided you have an ip68 waterproof connector.
- Please do not run the pump dry.
- Your pump must always be protected from water splashes or any liquid chemicals.
- Make sure the pump works in a ventilated environment.

### **Specifications:**

Model	Flow Rate	Volt	Current (A)	Head (m)	Cable	Outlet Dia	Weight
XC-SP002	4.3L/MIN	12	3.3AMP	24	50cm	10mm	0.68kgs

### **Warning:**

- To prevent injury, always disconnect the power source when installing or servicing any electric product.
- Do not use the pump to pump gasoline oil or any flammable liquids.
- Always make sure you use fuse amperage rated for your pump model.
- Failure to follow these instructions may result in serious injury or fire hazards.

### **Optional Materials:**

- Mounting screws
- Waterproof adhesive (epoxy, silicone or fibre glass adhesive) to mount the block.

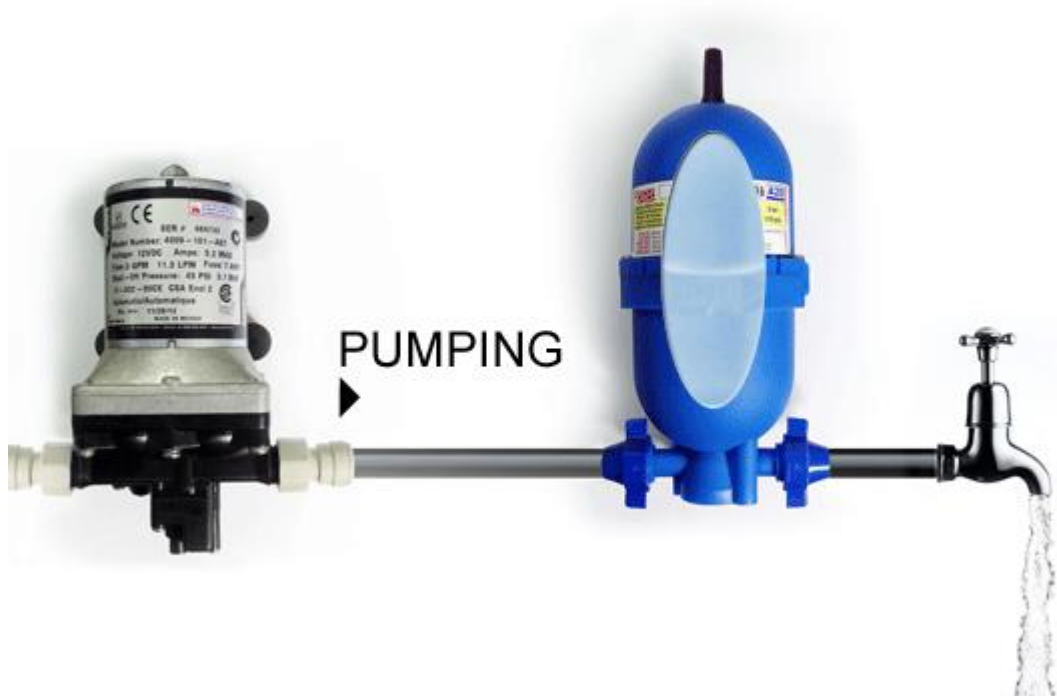
#### **Pump Mounting Instructions:**

**Warning:** remove any polystyrene or foam blocks covering the pump around for shipping purposes.

- **Step 1:** make sure you mount the pump facing down or aside on its feet make sure it is holding firmly as to avoid too much vibration that will affect your seals and bearings.

- **Step 2:** now insert your hose inlet/outlet and use hose clamps to secure the pipes.as is the pump has high pressure it's advisable to use hdpe pipes or high pressure flexi hoses.
- **Step 3:** now you can link your inlet pipe to the water source and outlet to the supply, you must always watch for the inlet/outlet arrow when installing this type of pump.
- **Step 4:** make sure your pump is not more than 2m high or away from water source when self-priming.
- **Step 5:** make sure you pump is covered or protected from water or rains never submerge the pump.
- **You can adjust your pressure by opening the front cover screw on the pressure switch, inside there is another screw by turning it clockwise you can adjust the start and stop pressure.**

#### Pump mounting:



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#### Operation:

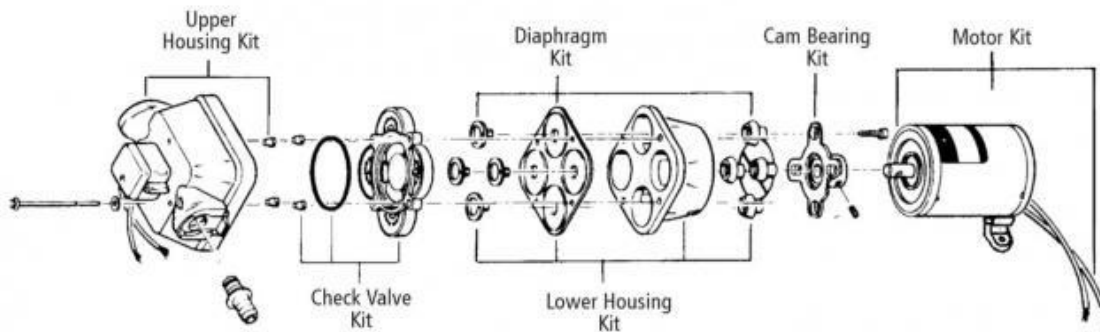
1. Connect your +- terminals accordingly to your battery positive and negative poles.
2. Make sure you have right size fuse on your positive pole.
3. Connect your pump to the control switch, depending on what operation you are using the pump for;
  - Use a float switch for draining or filling.
  - Use pressure switch for water pressure boosting.
  - Or manual start stop switch for water circulation etc.

#### Care & Maintenance:

- Always watch your power supply voltage or current for over voltage, under voltage or short circuit.
- Make sure your pump filter sieve is always clean of debris or any clogging dirty.

- Careful attention will guarantee outstanding pump performance

**Parts:**



**SUITABLE FOR USE;**

FL35 used in a R.V. open flow is 12.5 litres per minute, choked to 7 litres per minute. The FL35 is NOT suitable for a 6 -5.5 litres per minute Gas Geyser. The FL30 @ 7 – 4.5-5 litres per minute would be the correct pump.

**Pro Pumps used in Mobile Toilets**

The FL40 's flow is too high for the ball valves at 17 - 11 litres per minute and only suitable if used with a float switch. The best pump for Mobile Toilet Application would be the **FL35 VITON**

**Causes for Failures**

1. Leaks on the system will cause the pump to cycle. The Pressure Switch will fail Examples: poor connection, Gardenia fittings, Ball valve not shutting off properly.
2. Low voltage will allow pump to run continuously and not reach the cut off pressure of 2.4 bar, this will cause the motor to burn out eventually.
3. Application in mobile toilets; the VITON pumps will stand the best chance against chemical attack. Beware of inconsistent Formaldehyde strengths (i.e. toilets placed far from sight will receive a stronger solution.)

Please feel free to contact us if we can be of further assistance regarding the correct application of our Waterhouse Pumps.