

## WARNING:

Read all instructions carefully before installing and using this product.

This pump is sealed and, therefore, submersible. However, the electric wire connections must not be submerged. For extra protection, coat the butt joints and adjacent wire ends liberally with liquid electrical tape.

## SAFETY PRECAUTIONS:

- Automatic pump can only be used for water drainage, can not be used for other liquids.
- When installing, keep in mind that the black line is connected to the negative pole (-) and the brown (Non-automatic) or brown-white (automatic) conductor to the positive pole (+).
- Must use the appropriate fuse, fuse size look at the following features.
- The wire connection must be sealed with a marine sealant.
- All wires and connections must be carried out above the bilge water level. Do not remove the insulator unless necessary. All wiring applications are marine sealant oxidants.
- Can not run dry.

## SPECIFICATIONS:

Model	Flow Rate	Volt	Current	Fuse	Head	Wire Lead	Outlet Dia	N.W./G.W.	Dimensions(L × W × H)
SFBP1-G600-11	600GPH	12V	2.5A	4.0A	2.5M	1M	19mm / 3/4"	0.55 / 0.6kg	170 × 83 × 105mm
SFBP2-G600-11	600GPH	24V	1.5A	3.0A	2.5M	1M	19mm / 3/4"	0.55 / 0.6kg	170 × 83 × 105mm
SFBP1-G750-11	750GPH	12V	3.0A	5.0A	3.0M	1M	19mm / 3/4"	0.55 / 0.6kg	170 × 83 × 105mm
SFBP2-G750-11	750GPH	24V	1.6A	3.0A	3.0M	1M	19mm / 3/4"	0.55 / 0.6kg	170 × 83 × 105mm
SFBP1-G1100-11	1100GPH	12V	3.0A	5.0A	4.0M	1M	29mm / 1-1/8"	0.55 / 0.6kg	170 × 83 × 105mm
SFBP2-G1100-11	1100GPH	24V	1.8A	3.0A	4.0M	1M	29mm / 1-1/8"	0.55 / 0.6kg	170 × 83 × 105mm

## WARNING:

- Always turn off the power when installing or servicing.
- DO NOT use pump to remove gasoline oil or other flammable liquids.
- The size of the fuse should be exactly the same as the pump itself, and if it is not done, it may cause a fire or injury.

## OPTIONAL MATERIALS

- With 1/2 inch yacht plywood baffle (slightly larger than the pump base).
- With waterproof adhesives, such as: epoxy resin, silicone adhesives, glass fiber to strengthen the resin, etc. to adhere to the baffle.

## INSTALLATION GUIDE:

**Step 1:** Press the lock on both sides of the automatic submersible pump to remove the filter from the bottom of the pump.

**Note:** Strainer must always be properly installed before attaching and running pump.

**Step 2:** Determine the ideal installation location for the pump. If only one pump is used, it is usually installed at the deepest water level of the bilge when the ship is stopped. You must install a complete drainage pipe, through the level of installation of water pipes or constantly raise its position to eliminate all the water.

**Step 3:** Install the filter

A. If the filter is fixed to the wood, the use of a radius of 4mm stainless steel self-tapping screws.

B. If the filter is fixed to metal or glass fiber, first install a piece of wood, then the filter fixed to the block, then the pump installed in the filter above, to ensure that the two buckle buckle.

**Step 4:** Connect the 19mm/3/4" or 29mm / 1-1 / 8 " I.D. water pipe to the drain nozzle and clamp it with a stainless steel clip. It is recommended to use a standard pipe because the pipe is not knotted when it is suddenly bent, using a smaller diameter pipe, without damaging the pump, but will cause the flow to decrease.

**Step 5:** Wire

In order to prevent the melting or corrosion of the wire, it is critical that, at the highest possible level, it is tightened by an insulator or a plastic tape.

When installing the pump, use the 18 # wire, use the fine wire, will lead to overheating inside the wire, which makes the buck and affect the performance of the pump.

**PRECAUTIONS:**

1. Hull thickness of at least 1/2 inch, if you can not use the 1/2 inch yacht plywood baffle. The baffle is slightly larger than the base of the pump and is installed at the lowest position of the bilge. Install to ensure that the filter can be easily cleaned. The baffle is bonded with a waterproof adhesive such as an epoxy resin, a silicone adhesive, a glass fiber reinforced multi-resin, and the like.
2. If the pump is to be mounted on the baffle, install the pump smoothly at the lowest level of the bilge. To ensure that the outlet position is horizontal, if too high or too low, the pump will inhale the air causing clogging. (See Fig-ure 1)
3. Mark location of the three(3) mounting holes with a pencil or scribe.

WARNING: When drilling holes do not drill through the hull.

4. Carefully drill two 1/8 inch guide holes in the marked place and then lock a screw in each hole.

5. Side hose clamps(one to clamp hose to the pump, the other to the thru-hull connector)over end of the hose. Force hose over the discharge nozzle of the pump. install clamp.

6. Water pipe tilted up to the connector, to prevent the water pipe sink, blocking the water and air into the pump, the water pipe should not be too tight, pull too tight is not conducive to drainage.

7. Hold the tube over the connector and secure it.

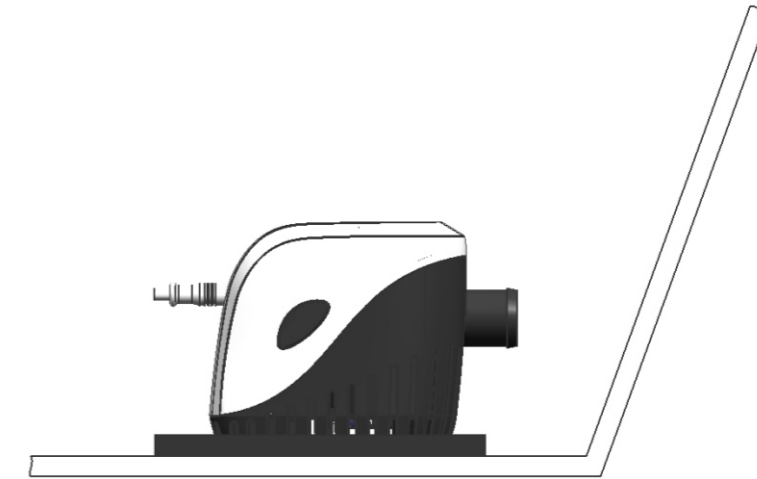


Figure 1

## OPERATION:

When the automatic pump of the brown-white wire connected to the battery positive (+), black wire connected to the battery negative (-), the pump has automatic function:

1. When the water level rises above 40-50 mm above the bottom of the screen, the floating switch is connected and the submersible pump starts to work.
2. When the water level drops to 20-30 mm above the plane of the bottom of the filter, the float switch stops working and the contacts are disconnected, and the pump stops working.

When the automatic pump's brown wire is connected to the battery positive (+), the black wire is connected to the battery negative (-), which is the same as the ordinary submersible pump and has no automatic function.

## OPERATION NOTES:

**WARNING:** Ensure that the voltage is 12V , and if the voltage is too high to damage the pump.

1. The line length should be enough if it is not long enough to wire. Please refer to (Figure 2) to connect the wires.
2. Line away from the debris to prevent drag.
3. Use a 18AWG-wire cable and the brown wire to connect to the fuse holder between the battery and the switch. Fuse should be placed in an easily replaceable place.

**Note:** Use the appropriate fuse size (refer to the above technical parameters).

**WARNING:** Improper fuses and waterproof connections will not be covered under warranty.

4. With three-wire switch will be able to carry out automatic and manual switching operation.

5. Turn the pump on to check operation. Feed water into the pump, check the wire connections if output appears to be too low. Reversed connections result in opposite impeller rotation that drastically reduces capacity and can cause premature pump failure.

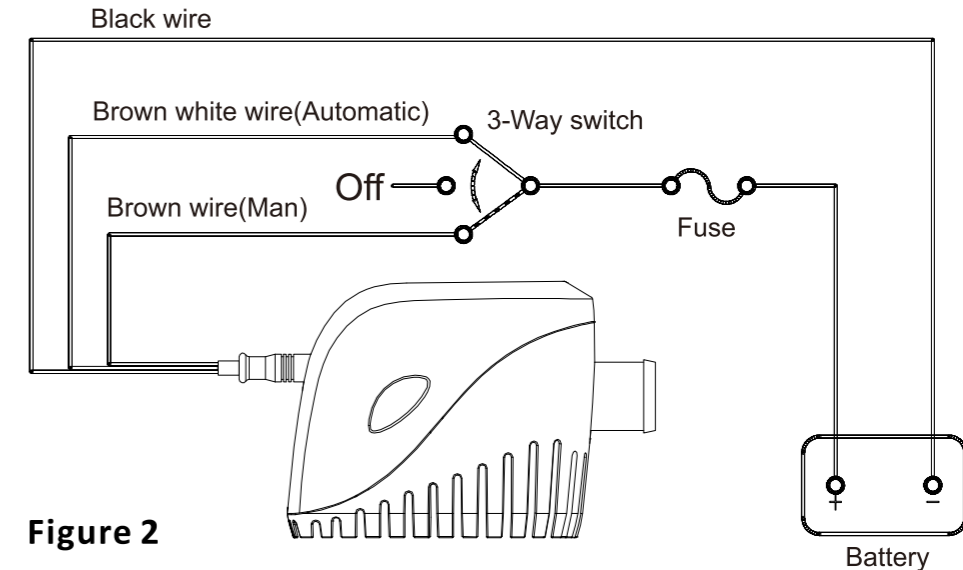


Figure 2

## MAINTENANCE ADVICE

- Occasionally check your pump to be certain impurities is not jamming the impeller and/or float within the housing. Careful attention will guarantee outstanding pump performance.
- Cleaning the tank / pump chamber, hold down the two sides of the buckle lift the pump can be carried out. See (Figure 3)
- Remove all residual impurities from the pump, impeller and so on to ensure that all impurities in the pump are clear and clean.
- Check the impeller: the impeller is tightly buckled on the motor shaft without being damaged and broken.
- Detect the cable to ensure that it is waterproof and in a high and dry position.
- Do not use household cleaning agents to clean the pump, because these cleaning agents are likely to corrode the pump material.

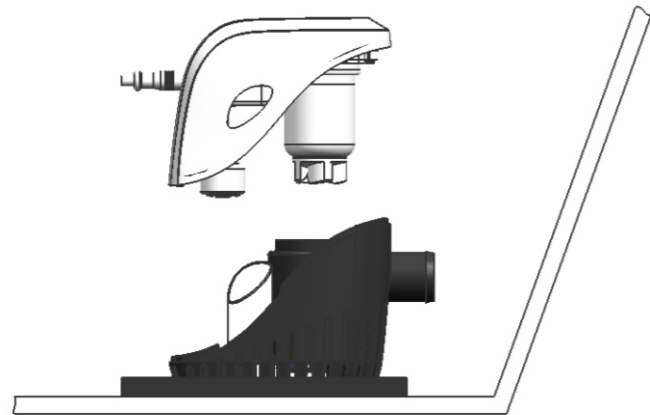
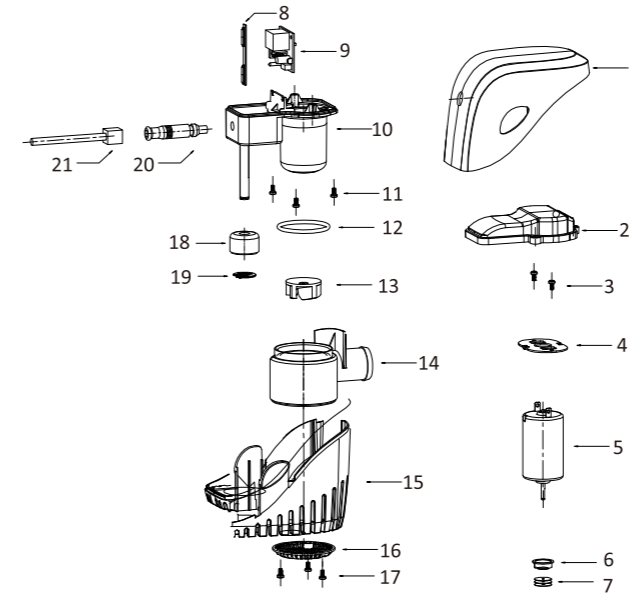


Figure 3

## Exploded map



Key	Description	Composing Material
1	Automatic pump cover	ABS
2	Automatic pump motor cover	ABS
3	Screw	Stainless steel
4	Motor bracket	Galvanized iron
5	Motor	SPCC
6	Oil seal seat	POM
7	Flat washer	ABS
8	Double reed single small circuit board	PCB
9	Relay circuit finished board	PCB
10	Automatic pump motor under cover	ABS
11	Screw	Stainless steel
12	Waterproof seal	ABS
13	Five leaf impeller	POM
14	Automatic pump runner connector	ABS
15	Automatic pump under cover filter	ABS
16	Filter small net	ABS
17	Screw	Stainless steel
18	Magnet blue float	ABS+ Magnet
19	Float Blank	ABS
20	Round bar line card	NBR70°
21	Jacket thread 3 * 0.75	PVC+ Copper