GROWONIX

TUNED FOR GROWING



SP-13-SS
Submersible Pump

Owners Manual

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Built in the U.S.A.

IMPORTANT SAFEGUARDS

To reduce risk of injury, always follow these instructions and safety precautions when using this pump and to maintain warranty.



Before handling this pump, always disconnect the power first.
This pump should only be serviced by a qualified person.

INSTALLATION/OPERATION:

- Never lift or carry pump by the electrical cord. Use a chain or rope affixed on handle to install/remove pump. To reduce potential damage to the pump from inadvertent lifting by the electrical cord, please refer to “Proper Lifting” located on the following page.

- Pump(s) are able to operate whether fully or partially submerged (please refer to Typical Installation Diagram, page 14). Pump must be shutdown if sump, pit or pond level drops below the motor housing.

- Pump is designed to pump clean water (maximum temperature of 122•F) with suspended solids up to 3/8 of an inch. Larger solids will clog the suction strainer plate leading to dry running and subsequent failure (Note: Pumping sand, gravel, and other hard debris will shorten the life of the pump). Elevate the pump with bricks or other support above the sump, pit or pond bottom if debris is present. Consult dealer for other fluids.

- Clean filter basin when cleaning inlet filter media when pump is shutdown.

- If used with a float switch, the float must have a full range of motion to operate properly without obstruction. Consult dealer for minimum dimensions required for proper float operation.

- Pump should be mounted upright only (vertical). Never lay the pump on its side.

ELECTRICAL REQUIREMENTS:

- Pump must be operated with a GFI breaker of at least 20 amps.

- High Or Low Voltage can damage the pump. Power from your utility or generator set cannot be more or less than ±5% of the rated voltage on the pump.

- Maximum distance from power source and pump must not exceed 100 feet using 16/3 electrical cables. This distance is from the breaker box and includes the pump cord. If the run is longer, consult a qualified electrician or your dealer.

- Lightning strikes can destroy the capacitor in your pump. Ensure proper protection is provided.

PROPER LIFTING:

A separate chain or rope should be attached to the handle for normal lifting. Please note that this will help prevent damage due to inadvertent lifting of the pump by the power cord.



Rope attached to Automatic pump for lifting and installation.



Rope attached to Manual pump for lifting and installation.

THE SUMP AND INSTALLATION:

If your basement does not currently have a sump installed, it would be necessary to check local plumbing codes as to the acceptable type of sump that may be used.

- Materials commonly specified are: clay tile, fiberglass, steel, concrete and polyethylene.
- It may be necessary to cut a hole in the basement floor and excavate for the sump.
- Plumbing and electrical contractors could advise you on proper installations of drain tiles, sump, pump and electrical service. GrowoniX recommends that a solid sump base be provided.
- The sump is fed by drain tile placed around the outside and/or inside basement walls at the footings.
- In applications where a gravel base must be used to relieve hydraulic pressure under the basement floor, be sure to provide a permanent and solid base for the pump (bricks or a steel plate). a sump cover capable of supporting 200 pounds should be employed to contain odors and for obvious safety reasons.

ELECTRICAL INSTALLATION:

Electrical service for any sump pump installation must be grounded and separately fused or breakered directly from the entrance box with a single grounding type receptacle at the pump. The receptacle should not be less than four feet above the basement floor for safety reasons. You should never touch a sump pump or discharge piping while the pump is connected to electrical power and water is present. The pump should bedisconnected from the electrical source before handling in all cases.

GENERAL APPLICATION INFORMATION

DISCHARGE PIPING INSTALLATION

To assure the maximum performance from your sump pump, the discharge pipe size and piping fittings should not be smaller than the discharge port of the pump. Smaller pipe will add to friction losses and reduce the capacity of the pump. Normally accepted materials are galvanized pipe, rigid plastic pipe or acceptable flexible pipe or hose. a piece of flexible hose between the pump discharge and the discharge piping will provide for ease in alignment, reduce vibration and noise, and will act as a union when it is necessary to remove the pump. Where the discharge pipe is long, a check valve is often employed to prevent the water from flowing back into the sump when the pump turns off. If the discharge is directed into a sanitary sewer, a suitable anti-siphon device or a free flow check valve should be inserted in the line to prevent backflow into the pit. Sump pumps are not designed to handle raw sewage. Do not attempt to adapt one for this type of application. A sewage ejector pump especially designed to handle solids must be used.

PUMP INSTALLATION

When the sump, electrical and discharge plumbing installation is complete and ready for the pump, clean all solid debris from the pit. Complete the plumbing connection to the pump and then plug the pump into the electrical outlet. a few extra minutes to test the sump pump installation are now in order. Fill the sump with water, note the turn on and turn off level of the pump, and the pumping cycle. This will allow you to calculate the approximate discharge flow of the pump system. If everything is operating properly, install the sump cover.

PUMP SELECTION

The pump should be of sufficient capacity and head to satisfy anticipated use requirements. Capacity is determined by a fixture unit value if effluent is drained to sump basin. Your local Wholesaler can assist you in fixture unit values. basement perimeter water intrusion varies by area and region. Typically a 1/3 HP or 1/2 HP DRAINAGE PUMP WILL EVACUATE MOST HOME SUMP PITS.

Commercial and industrial drainage applications require that of pumping volume and pumping head be performed to determine the proper size pump is applied.

NOTE: Pumping volume may vary seasonally due to rainfall and area run-off.

BASIN AND COVER

The basin should not be less than 18 inches in diameter and 24 inches deep.
Larger diameters are advisable in instances of increased pump capacity requirements:

Required Pump Capacity	Minimum Basin Diameter
Up to 35 GPM	18”
Over 35 GPM	24”
Over 60 GPM	30”
Over 100 GPM	36”
Over 150 GPM	48”

The basin should be located such that all water flows into the basin due to gravity. Outdoor installations should be at a sufficient depth to ensure protection from freezing.

NOTE:

GrowoniX SP-1 automatic can operate in a 12'' diameter basin or 8'' x 8'' square basin.

MAINTENANCE TIPS

- Every three or four months:
  1. Clean the pump screen or inlet opening. If your sump collects the discharge from an automatic washing machine, cleaning will be required more often. (before removing the pump be sure to disconnect the unit from electrical power; and reconnect after completion of cleaning);
  2. Pour enough water into the sump to cycle the pump and assure its proper functioning.
- Annually:
  Remove and clean the pump. Clean the sump pit also.



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This pump should only be serviced by a qualified person.



This instruction manual includes necessary items for installation, operation and maintenance.

SPECIFICATIONS

Part #	Max Flow Rate GPM	Discharge Dia. Inch	Motor Outout (HP)	Motor Phase	Voltage	Amps	Weight (lbs.)
SP-1M	39	1-1/4”	1/3	1	115	4.4	11
SP-1A	39	1-1/4”	1/3	1	115	4.4	11

	Standard	Optional
Discharge Size	1/3 HP – 1 1/4 inch 1/2 HP and 3/4 HP – 1 1/2 inch	
Range of HP	1/3, 1/2, and 3/4 HP	
Range of Performance	Capacity 2.7 to 72 GPM Head 9.3 to 57 feet	
Limitation Maximum Water Temperature	 122°F/50°C	
Solids	3/8" Spherical (2% by concentration)	
Speed	3600 RPM	
Materials Casing Impeller Shaft Motor Frame Fasteners	 304L Stainless Steel 304L Stainless Steel* 303 Stainless Steel 304L Stainless Steel 304L Stainless Steel	
Shaft Seal (Double)** Material – Upper Side Material – Lower Side Impeller Type Bearing Motor Single Phase Motor Protection Power Cord Automatic Float Switch	 NBR Fitted Carbon/Ceramic 1/2, 3/4, 1, and 1 1/2 HP NBR Fitted SiC/SiC 1/2, 3/4, 1, and 1 1/2 HP Semi-Open Sealed Ball Bearing Air-filled, Insulation Class F, 2 Pole, Rated Continuous Duty–Permanent Split Capacitor 115 Volt Built-in Motor Protection with Auto Reset UL/CSA SJTow-A with ECS No. 250 capplug with grounding pin – 20 Ft. Length Rated 15 Amp 125V – NEMA 5-15P Mechanical Float	

Sump basin must be vented in accordance with local plumbing codes.
These pumps are not designed for and CANNOT be installed in locations classified as hazardous in accordance with the National Electric Code, ANSI/NEPA 70-1984.

SETUP INSTRUCTIONS

STEP 1: Inspection: Your pump has been carefully packaged to prevent damage during shipping. However, occasional damage does occur due to rough handling. Carefully inspect the pump for damage that could cause it to fail.

STEP 2: Attach desired length of PVC or abS discharge pipe to pump outlet, using PVC adapter (11/4" pipe and adapter for SP-XX-3 & EPD-3 11/2" for EPD-5, 7, 10 & 15). Make sure open end of pipe will be above top of basin.

STEP 3: Clear sump basin of any water, debris or sediment.

STEP 4: Lower pump into basin.

STEP 5: Attach in line check valve to discharge pipe 12" to 18" above pump discharge with arrow pointing away from the pump (with the flow). Connect other end of check valve securely to drain pipe and tighten clamps.



Do not put check valve directly into pump discharge opening.

Step 6: Drill a 1/8" relief hole in the discharge pipe 5" above pipe connection to pump.

Step 7: Plug in pump and fill sump basin with water to test unit. Pump should turn on at 13" to 14" water level. allow pump to go through several ON-OFF cycles to assure satisfactory operation.



If pump does not operate properly, see the troubleshooting checklist on page 8.

SEPTIC TANK INSTALLATION

The PRO•DRAINER pumps can be used to pump septic tank effluent, but must be installed as follows:

- Install pump in separate compartment at the discharge side of the septic tank.
- Never install pump in main tank where sludge collects.
- Use with a junction box.

TOOLS NEEDED

- Screw driver
- Pipe wrench
- Adjustable wrench (medium-large)
- Hacksaw with 24-tooth blade for cutting plastic pipe
- Knife or round file for smoothing inside of all plastic pipe connections

MATERIALS NEEDED

- PVC or ABS pipe
  – 1 1/4” for SP-1
- PVC adapter
  – 1 1/4” for SP-1
- In line check valve
- Sump basin 18” or larger diameter plastic, fiberglass or concrete.
- Optional: gate valve (see installation drawing on page XX)

TROUBLESHOOTING

PROBLEM	POSSIBLE CAUSES
Pump does not run or hums.	• Line circuit breaker is off, or fuse is blown or loose. • Water level in sump has not reached turn-on level as indicated in installation drawing. • Pump cord is not making contact in receptacle. • Float is stuck. It should operate freely in basin. • If all of the above are OK, then the motor winding may be open.
Pump runs but does not deliver water.	• Check valve is installed backwards. Arrow on valve should point in direction of flow. • Discharge shut-off valve (if used) may be closed. • Pump is air-locked. Start and stop several times by plugging and unplugging cord. Check for clogged vent hole in pump case. • Impeller or volute openings are fully or partially clogged. Remove pump and clean. • Inlet holes in pump base are clogged. Remove pump and clean the openings. • Vertical pumping distance is too high. Reduce distance or resize pump.
Pump runs and pumps out sump, but does not stop.	• Float is stuck in up position. Be sure float operates freely in basin. • Defective float switch.
Pump runs but delivers only a small amount of water.	• Pump is air-locked. Start and stop several times by plugging and unplugging cord. Check for clogged vent hole in pump case. • Vertical pumping distance is too high. Reduce distance or resize pump. • Inlet holes in pump base are clogged. Remove pump and clean the openings. • Impeller or volute openings is fully or partially clogged. Remove pump and clean.
Fuse blows or circuit breaker trips when pump starts.	• Pump impeller is partially clogged with tar or paint, causing motor to run slow and overload. Remove pump and clean. • Pump impeller is partially clogged with tar or paint, causing motor to run slow and overload. Remove pump and clean. • Motor stator may be defective. • Fuse size or circuit breaker may be too small. • Impeller or volute openings are fully or partially clogged. Remove pump and clean.
Motor runs for a short time, then stops.	• Inlet holes in pump base are clogged. Remove pump and clean the openings. • Pump impeller is partially clogged with tar or paint, causing motor to run slow and overload. Remove pump and clean. • Motor stator may be defective. • Impeller or volute openings are fully or partially clogged. Remove pump and clean.