

SYSTEM 1 & 2 INSTALLATION (115V OPERATION)

IN THE BEGINNING

Before installing or operating this system, familiarize yourself with these instructions. You should also read any other instructions that are included with the components of this system.

BASIN LOCATION AND INSTALLATION

The polyethylene sewage basin may be installed as shown in the drawing or above ground. Above ground installation is often selected when the system can be hidden from view such as installation under the house. If an above ground installation is selected, a sturdy and level concrete pad is required to support the basin. Also inlet and discharge piping must be supported with pipe clamps or hangers.

Below ground installation is encouraged when the system will reside out in the open. A low structure should be constructed over the system to protect the discharge piping. Other basin designs and depths, including ones with underground discharge piping, are available from PL&A.

Install the invert or inlet pipe as shown in the drawing. SYSTEM 1 basins use a neoprene seal especially designed for plastic pipe. SYSTEM 2 basins come with a cast iron caulking flange and a 4ADA adapter for PVC or ABS pipe.

DISCHARGE PIPE AND FLOAT INSTALLATION

Before placing the pump in the basin install a length of 2" schedule 80 plastic pipe in the pump discharge. Heavy wall pipe is used so that the pump can be removed from the basin via the discharge pipe. The discharge pipe should extend approximately 10" above

the top of the basin. This will allow the pump port cover on the SYSTEM 2 basin to be lifted for inspection. Attach the float switch to the discharge pipe as shown in the drawing. The end of the float should not extend below the pump discharge when pointing straight down. If it extends further, the pump may become air locked. Allow enough tether so that the switch is slightly above the top of the pump when it swings to the 2 o'clock position.

INSTALLING THE PUMP, BASIN COVER, AND VENT PIPE

Place the pump in the basin in such a position that the inflow does not fall directly on the pump and float. Insure that the float moves freely and does not hang up. Install the basin cover over the discharge pipe. Be sure to install the square cut O-Ring in the discharge pipe flange. Also place the foam tape between the cover and the basin rim. Pull the pump power cord, piggy back float switch cord, and the high level alarm float cord through the appropriate hole in the basin cover. Feed these cords through the rubber stopper and place the stopper in the hole. The alarm float should hang freely in the basin just a few inches above the top of the pump. Secure the cords with tie straps to insure that they do not slip back through the stopper. Use the other stopper to seal the other hole in the basin cover. Install the vent pipe as shown in the drawing. Check local codes for venting requirements.

INSTALLING THE CHECK AND GATE VALVES

Install the check valve and gate valve as shown in the drawing. Insure that the check valve is in the horizontal position and oriented correctly (top up and flow arrow pointing away from the pump). A coupling is recommended between a threaded check valve and gate valve to facilitate pump removal. If a compression style check is used, a coupling is not required.

INSTALLING THE ALARM

Install the alarm panel in a location where it can be seen or heard in case of a pump failure. Up to 100 feet of 16 gauge wire can be added to the alarm float if desired. Wire the alarm float to the alarm panel as shown in the directions. Plug the alarm panel into any 115 VAC receptacle. Test the alarm by tilting the alarm float.

POWERING THE SYSTEM

Plug the piggy back float switch into a dedicated 115 VAC, 15 amp receptacle. Plug the pump power cord into the piggy back float. Test the circuit by lifting the piggy back float switch to the 2 o'clock position for a few seconds. The pump should start and then stop upon return to the straight down position. If the pump does not start, check for loss of power or a faulty float switch. If the pump continues to run in the off position, disconnect power immediately and replace the piggy back float switch.

START UP

Fill the basin with water. Insure that the pump is fully submerged before it starts. If not, readjust the piggy back float switch. The pump should start when the float reaches the 2 o'clock position and stop when the float returns to the 5 or 6 o'clock position. Do not allow the water level to fall below the pump discharge or the pump may become air locked the next time it starts.

If the pump starts but the water level does not drop, the pump may be air locked. Loosen the coupling or check valve to release the trapped air. If the level still does not drop, check the pumping elevation and orientation of the check valve.

TROUBLE SHOOTING

Although we occasionally encounter a faulty pump or float switch, 99% of initial problems are due to improper installation. Use the following list to trouble shoot your system. If the system still fails to function, call PL&A.

Pump does not run

Make sure the circuit breaker is on. Make sure the float switch is in the 2 o'clock position or higher. Check the float switch by unplugging the pump and plugging it directly in the receptacle. If the pump runs, replace the float switch.

Pump runs but does not pump

Make sure the pump is not air locked. Release the coupling to discharge trapped air. Check the check valve for proper orientation. Check for blockage in the sewer line. Make sure the vertical elevation does not exceed the capacity of the pump. (Contact PL&A)

Pump runs but pumps slowly

Check for blockage or a partially closed valve. Make sure the vertical elevation is not near pump shut off head. (Contact PL&A)

MAINTENANCE

The system requires very little maintenance. Two to three times a year, open the cover and hose down the pump, float, and piping. This will remove sludge buildup that could cause plugging or float hang up. If you hear unusual noises or notice erratic pump operation, investigate the cause. Usually, most problems result from faulty or hanging float switches. Replace faulty switches before they damage the pump. If the system trips a breaker during operation, check for pump damage or severe plugging.



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