# SUMPVAK INSTALLATION INSTRUCTION GUIDE

A professional, licensed plumber should install the SUMPVAK to ensure a trouble-free installation, which conforms to your local building codes.

Prior to installing a SUMPVAK water powered back-up sump pump (WPBUSP), there are a few issues the installer must be aware of:

1 Determine the static water pressure at the point of installation by making an on site pressure test.
2 If the static water pressure exceeds 80 PSI, a Water Pressure Reducing Valve (WPRV) must be installed. If it's less than 80 PSI, a WPRV should not be installed.
3 The discharge from a WPBUSP produces a tremendous amount of water in a very short period of time. Read step 6 below carefully, and make sure the discharge is directed away from the structure and any adjacent structures to avoid discharge water from pooling in unwanted areas.
4 Thoroughly flush out all water supply piping to the WPBUSP before final connection to the unit is made.
5 Never cut the plastic tie that holds the valve against the tee. It keeps the float and triggering assemblies in alignment.
6 Never remove the drip cup that has been inserted in the 1"discharge pipe of the SUMPVAK. This is to keep PVC glue from clogging up the unit. It will remove itself when the pump is activated.

**Note:** An inexpensive 220 PSI gauge that screws onto a hose faucet works great for determining the static, municipal water pressure. They can be acquired from most local plumbing supply or hardware stores for around $10.00. If the pressure gauge reads 80 PSI or more, a WPRV with a maximum pressure setting of 75 PSI **must** be installed on a ¾" or larger cold water supply pipe upstream of the SUMPVAK. More importantly, a WPRV occasionally bleeds out under excessively high pressure and will trap that higher pressure downstream of it. Furthermore, to release that downstream pressure through normal daily water usage and allow the WPRV to reset itself, it must be installed in one of the following two locations only:

1 Approximately 12" downstream of the 2nd shut-off valve downstream of the water meter - this is the best location; however, it will reduce the water pressure in the hot and cold water supply piping for the entire building.
2 Approximately 12" upstream of the shut-off valve on the cold water feed for the water heater. This will reduce pressure to the hot water supply only. In this application the tap for the SUMPVAK must be between the WPRV and the shut-off valve for the water heater. For more information regarding WPRV installations please see the trouble shooting guide or contact SUMPVAK Technical Support @ (248) 352-9350 M-F 9:00am – 5:00pm EST.

The WPRV depicted in the schematic diagram is for representation purposes only, and is not to be installed in that location.

**ONCE THE ISSUES ABOVE HAVE BEEN ADDRESSED, PROCEED WITH THE INSTALLATION.**

**ASSEMBLE THE SUMPVAK**

1 Prior to gluing the slotted intake pipe into the coupling, insert it into the coupling and place the unit into the sump pit so that it is plumb and sitting on the bottom of the sump pit – not on blocks or other debris. The SUMPVAK valve should be approximately 12" or more above the floor level – never below the top of the floor. If the sump pit is deeper than a standard sump, extend the length of the slotted intake pipe so that the valve is approximately 12" above the finished floor level. Remove the SUMPVAK from the pit. Now glue the slotted intake pipe – with or without an extension, into the coupling.

2 Install the trigger into the switch assembly with the magnet side facing down. Insert the cotter pin and bend the straight portion of it so that it won't come out.

3 Remove the top rubber washer from the top half of the float rod and insert the top of the rod into the trigger eyelet. Reinstall the top rubber washer. The trigger eyelet should be between the two rubber washers. Insert the bottom half of the rod - float at the bottom, through the bottom of the float rod guide. Insert the bottom half of the float rod into the float rod coupling, and gently tap the top portion of the rod until the lower float rod is completely inserted into the coupling. Adjust the lower float rod guide so the float rod is plumb to the SUMPVAK then glue the float rod guide to the intake pipe so that it makes contact with the 1" coupling . This will ensure that the float rod remains plumb to the unit and free from hang-ups due to misalignment. Place the SUMPVAK back into the sump pit . Make sure it is sitting on the bottom of the sump pit.

4 Adjust the rubber washers on the top portion of the float rod so that they are approximately 1" apart from each other. These are used to determine when the SUMPVAK starts and stops. They should be positioned so that the bottom of the float is 1" above the high water line (*the water level at which the electric sump pump starts*) in the sump when the trigger is in the off (down) position. This alignment is based on the following assumptions: First, the sump pit is a standard depth of either 24" or 36" deep. Second, the electric sump pump is sitting on the bottom of the sump pit - not on blocks or debris.

**INSTALL THE DISCHARGE PIPING**

5 Carefully determine a responsible location – i.e. not aiming at the neighbors' driveway, where the 1" PVC discharge pipe will exit the building wall. Drill a 1-3/8" hole through the building wall, usually near the existing electric sump pumps discharge pipe, for the SUMPVAK discharge line. The hole should be at least 8" to 10" above the ground outside the building.

6 Install a 1" PVC discharge pipe (*discharge piping greater than 1" will reduce the unit's pumping capacity*) to the unit with a 1" PVC coupling and run it **outside the building**. Secure the discharge line to a floor joist or wall with a proper hanger or strap. Cut off any excess discharge piping 6" from outside the building wall and seal the exit hole with an appropriate caulk or mortar. **Do not install a check valve of any kind in the discharge line, and never connect the discharge line to any existing electric sump pump discharge piping. Furthermore, do not connect SUMPVAK discharge piping directly to an underground drainage system.** SUMPVAK discharge piping can be connected to an underground drainage system only by way of an air gap between the discharge pipe and the drainage system inlet. **If the discharge line from a WPBUSP becomes plugged for any reason (***freezing, silt, mud, check valve malfunction, improper installation, etc.***), the WPBUSP will redirect both municipal water and rain water back into the sump pit upon activation and quickly flood the basement.**

**INSTALL THE WATER SUPPLY**

7 Install a ¾" Male Iron Pipe Dielectric Union into the inlet of the SUMPVAK valve. Use 10 – 12 wraps of Teflon tape on the union threads and carefully screw the union into the valve **hand tight only. Do not use pipe dope of any kind or pliers on the union fitting, and definitely do not solder near the valve.** Remember, the valve is plastic. Over tightening the union will cause the valve to crack and soldering near the valve will cause it to melt. In either case, the warranty will be voided and **you will not receive credit for another pump.**

8 If static water pressure exceeds 80 PSI, install a water pressure-reducing valve at either location mentioned above and set it to a maximum pressure of 75 PSI. Water pressures in some areas vary considerably from day to day. Since the SUMPVAK valve is designed to operate within a certain range of water pressure. Installing a WPRV will help maintain a proper pressure range. If the pressure is too great, the valve may not function properly. If static water is below 80 PSI, a WPRV should not be installed.

9 Install a Tee fitting with a ¾" center port into a cold water supply line to create the tap for the SUMPVAK. Install a ¾" **full flow** ball valve on the ¾" water supply downstream of the tap. Continue piping all the way to the SUMPVAK. Make sure to properly secure all piping to floor joists and walls. Install a short drip-leg at the bottom of the water supply drop to catch any flux, solder or other water born particles that could enter the valve and cause it to malfunction. Finally, flush out the water supply line thoroughly before connecting it to the SUMPVAK.
**Note:** Making the tap just downstream of the water meter is the best location because it will allow the home owner to shut off the water supply to the home for winterization while still supplying water to the SUMPVAK for emergency use. Tapping into the cold water feed to the water heater is the next best location.

10 After flushing out the water line, connect the water supply to the SUMPVAK**.** Slowly turn on the supply valve to energize the system. The SUMPVAK may start, but it should shut itself off quickly. Check the system by lifting the trigger. The SUMPVAK should start. Let it run for a few seconds and release the trigger. The SUMPVAK should shut itself off. If the SUMPVAK does not start or stop properly, please review the trouble shooting guide before calling Tech Support.

**MAINTENANCE**

Home owner **must** activate the SUMPVAK for 20 seconds each month (gently lift the trigger with your finger) to keep it clean and in good working order. Also, check the intake slots once a year to make sure they are clean and free of debris. Failure to follow the installation instructions and these recommendations will void the SUMPVAK warranty.