

Vulcan Eco-Maxx

Sump Pump

OPERATION MANUAL

Dated: 04/02/2018

Document Name: Vulcan_Eco-Maxx

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MARKS & MEANINGS



DANGER: Keep the pump equipment out of the reach of children! Warns that the failure to follow the directions given could cause serious risk to individuals or objects.



WARNING: This sign warns the operator that the failure to follow an instruction may damage the pump and/or the system.



VW33

VW50

INTRODUCTION

Thank you for purchasing a Vulcan® sump pump. Take the time to read the instructions carefully before using this appliance. We strongly recommend that you keep this instruction manual in a safe place for future reference.

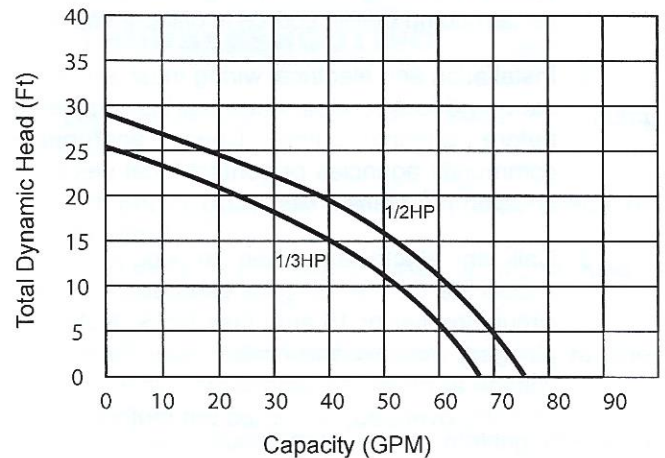
Check the nameplate for your pump's specification, refer to the table list.

Be careful not to exceed the given specifications in the use of your pump.

LIMITATIONS

This pump series is suitable to pump water and also can be used both for permanent and temporary installation.

The pump can be placed in a sump pit that means it could pump rain water containing suspended solid particles no larger than 1/4" in diameter.



Model	Output		Discharge (inch)	Rated		Maximum		Dimensions L x W x H	Weight (lbs)
	HP	Amp		Head (feet)	Flow (GPM)	Head	Flow		
VW33	1/3	4.5	1.5	10	50	0 GPM @ 25'	68 @ 0'	7-5/8 x 5-1/2 x 12-1/2"	16
VW50	1/2	5.8	2	10	61	0 GPM @ 29'	78 @ 0'	8-3/4 x 5-3/4 x 13-5/8"	24

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WARNING: The pump can be used for sea water but not inflammable, corrosive, explosive or dangerous liquids.

INSTALLATION

Drill a 1/8" inch hole into PVC pipe 4 inches above the pumps discharge.

Do not work on pump until power is unplugged. Do not cut off ground pin or use an adapter fitting. Do not use an extension cord.

The pump power cord should be connected to a separately fused, grounded line with a minimum capacity of 15 amps.

It can be connected to non-fused breaker at the recommended amperes. Never touch the pump when it is connected to electrical power.

1. Before installing or servicing this pump, be certain pump power source is disconnected.
2. Installation and electrical wiring must adhere to state and local codes and must be completed before priming pump. Check appropriate community agencies or contact local electrical and pump professionals.
3. Call an electrician when in doubt. Pump should be connected to a separate 15 amps circuit breaker or 15 amp fuse block. Note that plugging into existing outlets may cause low voltage at motor, causing blown fuses, tripping of motor overload, or burned out motors.
4. A permanent ground connection from pump to the grounding bar at the service panel is mandatory, Vulcan® sump pumps come with a grounding conductor and a grounding-type attachment plug. Do not connect pump to a power supply until permanently grounded. For maximum safety, connect pump to a circuit equipped with a fault interrupter device when you position the pump's grounding wire.
5. Voltage of power supply must match the voltage of the pump.

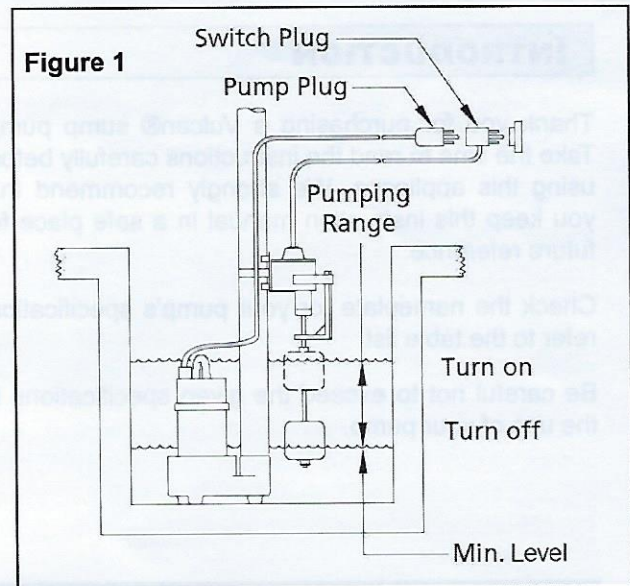
6. Piping: Plastic PVC pipe could be installed in the outlet piping, but drain hose, galvanized steel or copper pipe may be used if desired. All piping must be clean and free of all foreign matter to prevent clogging. Use thread compound on all threaded joints unless specified otherwise. Be sure to seal the thread connection with tape when using the pipe fitting to connect the flange.

7. Before installing pump, clear sump basin of any water, debris or sediment.



WARNING: Sump basin must be vented in accordance with local plumbing codes. Vulcan® sump pumps are not designed for, and can not be installed in locations classified as hazardous.

8. Position vertical switch on discharge pipe, making sure that off level is not lower than minimum level. **See Figure 1.**

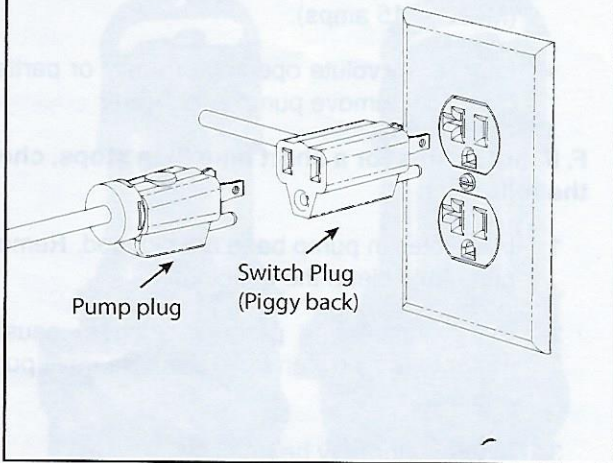


Level Control switch, please refer to its manual for installation instructions.

9. Tighten pipe clamp around pipe and through mounting bracket slots.
10. If needed, on and off stops on switch can be adjusted. **See Figure 1.**
11. Plug piggyback plug into a grounded outlet, then plug pump into the piggyback plug. **See Figure 2.**



Figure 2



12. Cycle the system for proper operation. Filling the basin may require a bucket or garden hose to cycle. Make adjustments if needed and cycle system again to ensure proper operation.
13. Make sure that float is free and unobstructed.
14. Secure all excessive and loose cord to avoid future problems.

ELECTRICAL WIRE CONNECTION



DANGER: Before servicing a pump, always shut off the main power breaker and then unplug the pump. Make sure you are not standing in water and are wearing insulated protective sole shoes, under flooded conditions. Contact your local electric company or a qualified, licensed electrician for disconnecting electrical service prior to pump removal.



WARNING: Verify that the voltage and frequency of the pump shown on the nameplate correspond to those available on the mains.

1. The installer must make sure that the electric system is grounded in accordance with the law in force.
2. The plug and connections should be protected from water splashes. Before using the pump, always inspect it visually (especially power cable and plug).

3. Do not use the pump if it is damaged.
4. If the pump is damaged, have it inspected by an authorized service center only.
5. Make sure that electric connections are protected from inundation. Protect the plug and the power cable from heat, oil or sharp edges.



WARNING: The power cable must be replaced by qualified personnel only.

Grounding

The plug of the power cable has a double grounding contact, so that grounding can be performed by simply inserting the plug

Overload Protection:

This pump series has a built in thermal protection switch. The pump stops if an overload condition occurs. The motor restarts automatically after it has cooled down.

TROUBLESHOOTING



DANGER: Shut off power to pump.

A. If pump does not run and hums, check the following:

1. Check line circuit breaker is off, or fuse is burned or loose.
2. Check water level in sump has not reached turn-on level.
3. Check pump cord is not making contact in receptacle.
4. Check float is stuck. It should operate freely in basin.
5. Check if all of the above are OK, then the motor could be malfunctioning.

B. If pump runs but does not deliver water, check the following:

1. Check valve is installed backwards. Arrow on valve should point in direction of flow.

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2. Discharge shut-off valve (if used) may be closed.
3. Impeller or volute openings are fully or partially clogged. Remove pump and clean.
4. Pump is air-locked. Start and stop several times by plugging and unplugging cord. Check for clogged vent hole in pump case. Drill a 1/8 inch hole into PVC discharge pipe.
5. Inlet holes in pump base are clogged. Remove pump and clean the openings.
6. Vertical pumping distance is too high. Reduce distance or change the discharge fittings of the pump.

C. If pump runs and pumps out sump, but does not stop, check the following:

1. Float is stuck in up position. Be sure float operates freely in basin.
2. Defective float switch. Replace with float switch.
3. Defective vertical switch. Replace with vertical switch

D. If pump runs but only delivers a small amount of water, check the following:

1. Pump is air-locked. Start and stop several times by plugging and unplugging cord. Check for clogged vent hole in pump case. Drill a 1/8 inch hole into PVC discharge pipe.
2. Vertical pumping distance is too high. Reduce distance or change the discharge fitting of the pump. Inlet holes in pump base are clogged. Remove pump and clean the strainer and openings.
3. Impeller or volute openings are fully or partially clogged. Remove pump and clean.
4. Pump impeller is partially clogged, causing motor to run slow and overload. Remove pump and clean.

E. If fuse blows or circuit breaker trips, check the following:

1. Pump impeller is partially clogged, causing motor to run slow and overload. Remove pump and clean.

2. Motor stator may be defective.

3. Fuse size or circuit breaker may be too small. (Must be 15 amps).

4. Impeller or volute opening are fully or partially clogged. Remove pump and clean

F. If motor runs for a short time then stops, check the following:

1. Inlet holes in pump base are clogged. Remove pump and clean the openings.
2. Pump impeller is partially clogged, causing motor to run slow and overload. Remove pump and clean.
3. Motor stator may be defective.
4. Impeller or volute openings are fully or partially clogged. Remove pump and clean also clean the strainer if you had installed.

