



FREQUENTLY ASKED QUESTIONS CONCERNING 4" Submersible Pumps

Q1. What is the maximum depth these pumps can pump water from?

A1. We manufacture three different size horsepower 4" submersible pumps, the 1/2 HP pump can pump from depths of 60 - 100 ft, the 3/4 HP pump can pump from depths of 100-175 ft and our 1 HP can pump from depths of 175-250 ft all at 10 GPM.

Q2. Why will the pump not build pressure?

A2. The 4" submersible pump could not be building pressure because of one of the following items:

- The pump is air locked
- A low yield well
- The check valves installed could be malfunctioning
- There is a leak in the riser pipe
- The intake screen on the 4" submersible pump could be clogged

Q3. Why is the pump producing a low volume of water?

A3. The 4" submersible pump is producing a small amount of water because of one of the following reasons:

- The bleeder orifice check valve is stuck or installed backwards, please examine the valve - if stuck, free the valve, if installed backwards, reverse.
- The water level is low, determine the lowest water level in the well while the pump is running and compare to the pump depth settings. Lower the pump further into the well but at least 5ft above the bottom.
- The voltage is low, check the voltage at the control box with the pump running and/or check incoming wire size and power supply wire size that it is the correct AWG size.
- The intake screen is plugged, pull the pump, check the condition of the screen and replace or clean as needed.
- The check valve at the pump discharge is stuck, pull pump, examine valve and free the check valve if need be.

Q4. Why is this pump short cycling?

A4. The following reasons could cause the pump to be short cycling:

- There are leaks in the system, it must be air and water tight.
Check all of your tank connections with soapsuds for air leaks and check your plumbing for leaks.
- The pressure switch is defective, readjust or replace switch.

Tank is waterlogged:

- Pre-Charged Tanks: check tank air pressure and check for leak in the bladder. Ensure air pressure is 2 PSI less than the pump cut-in pressure (when there is no water pressure on the system). Replace bladder if necessary.
- Air over water tank: check for air leaks, air volume control and snifter valve operation.
Replace or repair tank or snifter valve.
- There is a leak in the drop pipe, raise the drop pipe one length at a time until water stands in the pipe and then replace pipe above that point.
- The pressure switch is too far from the tank, ensure the switch is within 1 foot of the tank.

Q5. Why is the pump tripping the circuit breaker?

A5. The following reasons could be why the 4" submersible well pump is tripping the circuit breaker:

- Incorrect fuse size, please refer to our recommended fusing data below:

Recommended Fuse Data - 3 Wire Submersible

HP	Volts	Fuse Size		
		Stand	Dual	C.B.
1/2	230	15	10	15
3/4	230	25	15	20
1	230	30	15	25

Recommended Fuse Data - 2 Wire Submersible

HP	Volts	Fuse Size		
		Stand	Dual	C.B.
1/2	230	15	10	10
3/4	230	15	10	15
1	230	20	15	20

Q6. What AWG wire size is needed for this 4" submersible pump?

A6. The AWG wire size that is required for the 4" submersible pumps is dependent on the horsepower of the pump and also the run of your electrical wires. Please refer to the two graphs below and note that you will want to measure your wire length needed from your electrical source to where the pump will be installed in the well.

Recommended Wire Size (AWG) - 3 Wire Submersible

HP	Volts	14 AWG	12 AWG	10 AWG	8 AWG	6 AWG	4 AWG	3 AWG	2 AWG	1 AWG	0 AWG	00 AWG
1/2	230	359'	571'	912'	1444'	2246'	3581'	4502'	5685'	7162'	9040'	
3/4	230	281'	447'	713'	1129'	1757'	2800'	3521'	4446'	5601'	7070'	8920'
1	230	233'	371'	592'	937'	1458'	2324'	2921'	3689'	4648'	5867'	7402'

Recommended Wire Size (AWG) - 3 Wire Submersible

HP	Volts	14 AWG	12 AWG	10 AWG	8 AWG	6 AWG	4 AWG	3 AWG	2 AWG	1 AWG	0 AWG	00 AWG
1/2	230	466'	742'	1183'	1874'	2915'	4648'	5843'	7379'	9295'	11733'	
3/4	230	353'	562'	891'	1420'	2210'	3523'	4429'	5594'	7046'	8895'	11222'
1	230	271'	430'	686'	1087'	1692'	2697'	3390'	4281'	5394'	6808'	8590'

Q7. What size should the pressure tank be?

A7. We require that all pumps have a minimum of one minute run time therefore the smallest pressure tank size we suggest for our 4" submersible pumps is 32 gallons.

Q8. What voltage does this pump run on?

A8. Our 4" submersible pumps require 230 volts for operation.

Q9. Why is there air and/or a milky discharge coming from the faucet?

A9. If there is air or a milky discharge coming from the faucets, you most likely have gas in the well water. You will need to check for gas in the well water, remove bleeder orifices; plug tees, be sure plug tees do not leak and if necessary separate gas from air before it enters the pressure tank.

Q10. Does a control box need to be installed for this 4" submersible pump?

A10. A control box will need to be installed for 3-wire pumps, 2-wire pumps contain the motor starting componets inside the pump.

Q11. Why is the pump powering on but not producing water?

A11. The 4" submersible pump is not producing water because of one of the following reasons:

- The bleeder orifice check valve is stuck or installed backwards, please examine the valve - if stuck, free the valve, if installed backwards, reverse.
- The water level is low, determine the lowest water level in the well while the pump is running and compare to the pump depth settings. Lower the pump furthur into the well but at least 5ft above the bottom.
- The voltage is low, check the voltage at the control box with the pump running and/or check incoming wire size and power supply wire size that it is the correct AWG size.
- The intake screen is plugged, pull the pump, check the condition of the screen and replace or clean as needed.
- The check valve at the pump discharge is stuck, pull pump, examine valve and free the check valve if need be.

Q12. What size well casing should be used with the 4" submersible pump?

A12. For our 4" submersible well pumps we suggest that a 5" or 6" well casing should be used. If your well casing is larger then 6" in diameter please use a sleeve for the pump.

Q13. Does a check valve need to be installed when using a 4" submersible pump?

A13. We manufactured our 4" submersible well pumps with a check valve at the discharge of the pump. We do recommend to install a check valve for every 100' of suction pipe you use.

Q14. Can an exisiting control box be used to power a 3-wire Eco-Flo pump?

A14. Our 4" submersible well pumps have only been tested with the control boxes we manufacture, we highly suggest that you replace your current control box with our model.

Q15. Why will the 4" submersible well pump not start?

A15. The following reasons could be why the 4" submersible pump will not start:

- There is no voltage at the fuse box, replace fuse.
- There is no voltage at the pressure switch, replace faulty pressure switch.
- There is no voltage at the control box, rewire the supply to the control box.
- Cable or splices are bad, check all wires to ensure there are no knicks, your splices are well connected and/or consult a liscenced electrician or serviceman
- The control box is wired incorrectly, reconnect the control box correctly (see wiring diagram in manual)