

## How to Install the Grundfos SQFlex Submersible Pump

One of the reasons the Grundfos SQFlex solar water pump is ideal for living off the grid is because it is simple to install if you follow some basic steps.

Items you will need in addition to the submersible pump:

- Black Poly pipe, connectors, and clamps. Use 1" for 3 SQF or 6SQF. Use 1¼ inch for 11 SQF and 25SF. Use 2" for 40SQF and 75 SQF. You don't have to use rigid steel pipe.
- Rope, 1/2". Poly rope works well, don't use Manila rope, it falls apart after a while. Buy more rope than your well depth. Use a good sturdy knot if you have to tie lengths of rope together.
- A roll of black tape.
- A sturdy eye hook on or near the well head to tie the rope to.
- Submersible Pump Cable, 10 ga, 2 conductor with ground wire.
- Underwater Cable Splices and Heat Shrink Tube to attach the pump cable to the submersible cable. See "How to use Underwater Cable Splices".

Procedure:

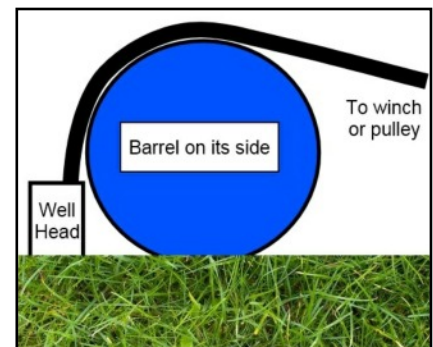
1. Lay the pump next to the well head.
2. Roll out the pipe, rope, and cable side by side, starting from the well head. Measure these to make sure you have enough to get to your water level in the well.
3. Attach the pipe, rope, and cable to the pump. Use Underwater Cable Spices for the cable connections.
4. Wrap the pipe, rope, and cable together with the black tape.
5. Create a place to anchor the rope near the well head. A sturdy hook on the well head or well cap will work.
6. For shallow wells, lower the pump and rope/pipe/cable assembly into the well. This may take two or more people, because it's heavy. One person at the well head, and another person as a safety at the end of the rope. Wear leather gloves so you don't get rope burn.
7. If you have to lower the pump more than a couple hundred feet, you should use a winch or a sturdy pulley attached to a truck to control the rope. Lay a steel barrel down sideways at the well head and run the rope/pipe/cable assembly over it to reduce pinching and abrasion as the rope/pipe/cable goes into the well. You will need more rope on hand with this technique.
8. When the pump is at the correct depth, tie off the rope on the hook.



Black Polyethylene Pipe. Use the NSF grade instead of Utility grade, because NSF is thicker and stronger.



Join pipe pieces with four clamps. For details on working with poly pipe, see "Input and Output Pipe Details" in the High Lifter section.



Use a barrel on its side to reduce abrasion and kinking

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