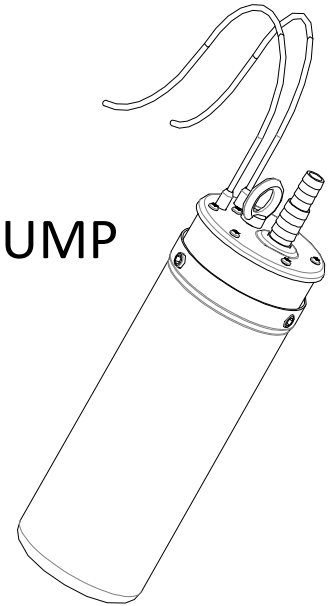


AQUATEC SWP-4000
SOLAR ELECTRIC SUBMERSIBLE PUMP
D.C. POWERED



- ✓ Made in USA with proven Aquatec design and quality.
- ✓ Fits in any well casing 4" or larger.
- ✓ Pump is protected from moisture intrusion by double-oring seals
- ✓ Capable of pumping water from depths of up to 250 ft.
- ✓ Able to operate with voltage up to 30 vdc.
- ✓ Rugged Stainless Steel shell construction for optimum durability and corrosion resistance.
- ✓ Factory installed 36" of 12 ga. motor leads eliminate failure from improperly field-installed leads.
- ✓ Dual size port outlet can accommodate ½" hose barb and ½" drop pipe (0.622" ID) or 5/8" hose barb.
- ✓ Anti Wicking cable entrance protects the motor from an incorrectly installed splice.
- ✓ Over-sized eyelet for easy installation of safety line.
- ✓ Built-in 50 mesh stainless steel screen to prevent debris intrusion.
- ✓ Field serviceable with our full line of repair kits.
- ✓ Warranty is 12 months from date of purchase not to exceed 18 months from date of manufacture.
- ✓ Recyclable packaging

SUBMERSIBLE PUMP PRODUCT INFORMATION

The Aquatec SWP-4000 submersible pump that you have purchased is manufactured from quality components in our Irvine California manufacturing facility. All of the materials of construction are potable water safe. The pump is designed to operate on any 12-30 vdc power source, including a 72 cell series array, a 60 or 70 cell module, or a 12 or 24 vdc battery bank. (see table in performance section of this booklet).

Installation of the product is simple and does not require any special tools. The instructions included in this booklet will ensure ease of installation and maintenance.

The submersible pump is ideal for remote off the grid locations for home and livestock water needs. The Aquatec SWP-4000 is an electric positive displacement diaphragm pump. Internal over pressure protection is included in the design of the pump to protect all components in the installation. The maximum pump diameter is 3.75 inches, designed to fit into a standard 4 inch well casing.

COMPONENTS NEEDED FOR INSTALLATION

Power supply: For nominal performance, the pump requires 24 vdc /4.5 amps (108 watts). The voltage range of operation is 12 volts min. to 30 volts max. The suggested solar array for best performance would be a 250 watt panel array. The 250 watt array would best support the pump performance on a partial sunny day. See chart below for performance:

Vertical lift requirement:

PERFORMANCE								
12 vdc performance			24 vdc performance			30 vdc performance		
Vertical lift	flow rate	current	Vertical lift	flow rate	current	Vertical lift	flow rate	current
Feet	gpm	amps	Feet	gpm	amps	Feet	gpm	amps
20	.62	1.1	20	1.35	1.3	20	1.7	1.4
40	.60	1.4	40	1.32	1.6	40	1.65	1.7
60	.58	1.7	60	1.28	1.8	60	1.6	1.9
80	.57	1.8	80	1.25	2.0	80	1.55	2.1
100	.56	2.2	100	1.22	2.3	100	1.5	2.4
120	.53	2.4	120	1.20	2.5	120	1.48	2.6
140	.52	2.7	140	1.15	2.6	140	1.42	2.8
160	.51	2.8	160	1.12	2.8	160	1.4	3.0
180	.49	2.9	180	1.08	3.1	180	1.35	3.2
200	.48	3.1	200	1.06	3.3	200	1.3	3.4
230	.43	3.5	230	1.0	3.5	230	1.25	3.7

Cable and splice:

Location of the panels should be close to the pump application for limited voltage drops through wire run lengths. The suggested wire gauge is #10 AWG jacketed Submersible cable. It is important to make a quality watertight splice to connect the electrical conducting wires to the submersible pump lead wires. Improper sealing of the splice may allow water intrusion which will damage the pump motor and/or cause reduced pump performance.

Discharge line The hose or pipe should be pressure rated for 150 psi. If using rigid drop pipe for the discharge line it is recommended to use a length of 6 in. flexible hose to connect to the pump outlet fitting secured with a stainless steel clamp. Then, to the other end of the short 6 in. hose connect a 1/2" NPT x 1/2" Barb fitting secured with another stainless steel clamp. If using flexible discharge tubing you may connect directly to the dual size stainless steel outlet nipple which fits 1/2" hose barb tubing (0.50 inch ID) or 1/2" Poly pipe (.062 inch ID). (see figure1). To determine total dynamic head/delivery see chart . (fig. 2)

Safety line: Install safety line (for lowering and retrieving pump) through the pump eye bolt. Band the Safety line, hose and electrical cable together with tie wraps every 10 feet to prevent damage to lines when installing the pump. (see fig. 2)

PUMP INSTALLATION IN WELL

1. Lay out the assembly components on a clean ground surface and begin assembly. Connect the drop pipe or hose to the pump outlet fitting. See fig. 1.
2. Using a submersible splice kit make a water tight splice joining the drop cable to the pump lead wires.
3. Connect the safety line to eye bolt.
4. Band all of the above items together as shown in fig.2.
5. If the well has high sand content a sand shroud may be necessary to prevent pump damage.
6. Lower the assembly into the well.
7. Install check valves every 100 feet to relieve pressure on the internal pump components.
8. Tie off the safety line to the well cap.

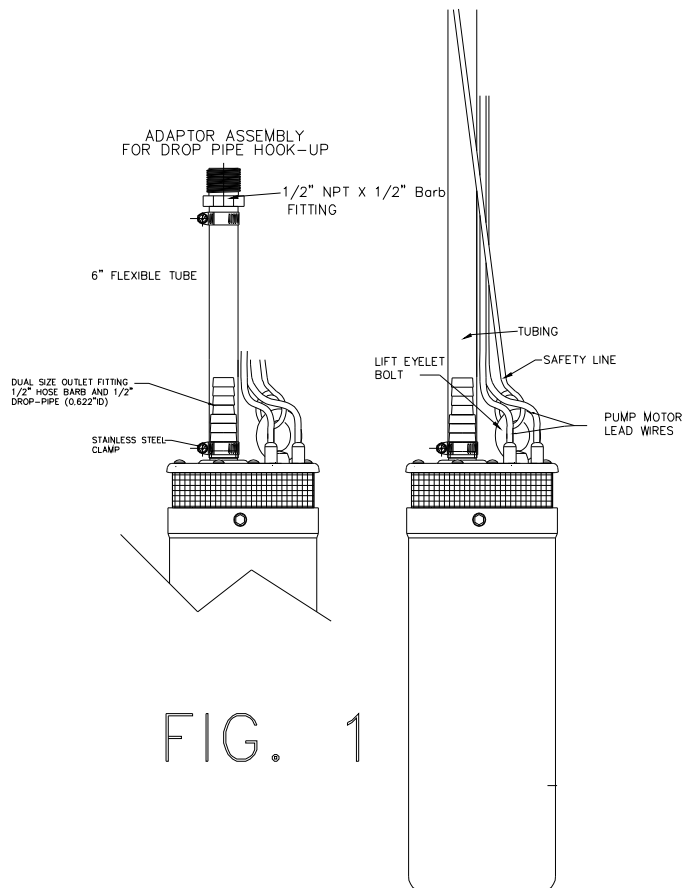


FIG. 1

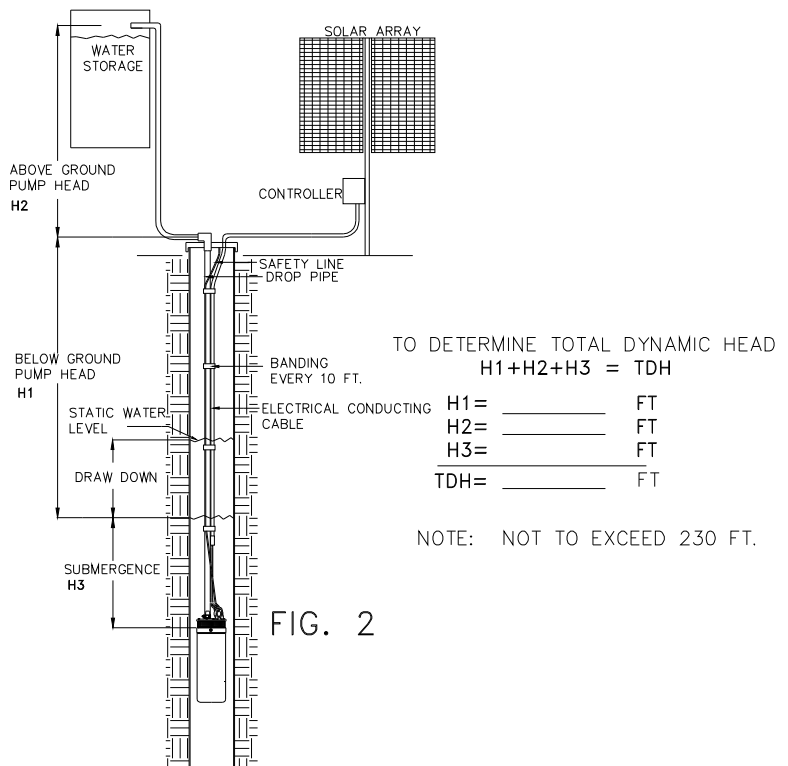


FIG. 2

