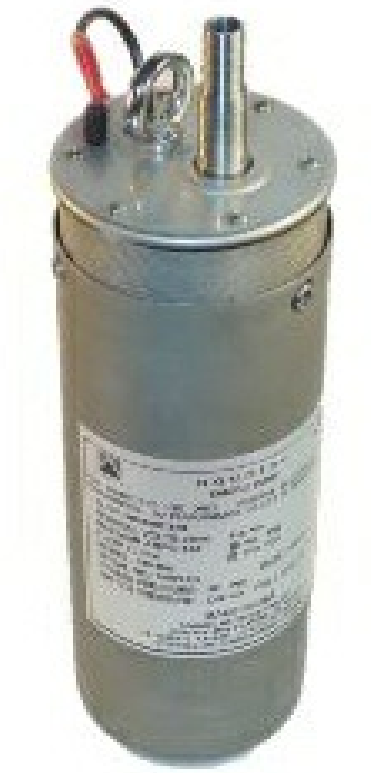
The Aquatec SWP-4000 Submersible Pump



The Aquatec SWP-4000 submersible pump is designed for off-grid locations for home and livestock water needs. It is a positive-displacement diaphragm pump, constructed with high-grade materials that are all safe for potable water usage. This product is made in the U.S.A.

This pump is designed to operate from a nominal 24 VDC PV array (72-cells in series), but can also be run with a 60-cell module. The pump requires about 110 W for nominal rated performance, but a larger array will produce the needed power in less light, extending the pumping time and volume delivered in the morning, afternoon, and on cloudy days.

For PV-direct operation an LCB pump controller should be used. Either of the two SHURflo pump controllers, the Dankoff DSP-200, or the Solar Converters PPT 12/24-7 can be used.

The pump can also be powered from a 12 or 24 V battery bank. 12 V operation reduces water flow and production by about half of the 24 V rating. An LCB is not needed when the pump is powered from a battery, however a DC fuse or circuit breaker rated for 5 A should be installed in the positive conductor.

The SWP-4000 can pump up to 230' of head (elevation change from top of water surface in the well to the top of the storage tank). It measures 3.75” at its maximum diameter, so it will fit into a 4” or larger diameter well casing.

It is protected from internal over-pressure, and protected from moisture intrusion by double O-rings. Rugged stainless steel outer shell provides high durability and corrosion resistance. The built-in 50- mesh stainless steel water intake screen prevents debris intrusion. It comes with a factory installed 36” cable lead (use underwater splice kit for attaching power cable). The stainless steel water output nipple allows the use of water hose or 1⁄2” black poly pipe (outlet pipe should be rated for at least 150 psi).

The pump is field serviceable and it should be serviced every 2 years if in daily operation. Made in U.S.A. Warranty is 12 months from date of purchase or 18 months from date of manufacturing.

Note: The amperages in the table below are running amperages drawn by the pump when running. PV array rated amperage needs to exceed these figures by at least 25%.

Feet of Head	12 VDC Performance		24 VDC Performance		30 VDC Performance	
	GPM	Amps	GPM	Amps	GPM	Amps
20	0.62	1.1	1.35	1.3	1.7	1.4
40	0.6	1.4	1.32	1.6	1.65	1.7
60	0.58	1.7	1.28	1.8	1.6	1.9
80	0.57	1.8	1.25	2	1.55	2.1
100	0.56	2.2	1.22	2.3	1.5	1.48
120	0.53	2.4	1.2	2.5	1.48	2.6
140	0.52	2.7	1.15	2.6	1.42	2.8
160	0.51	2.8	1.12	2.8	1.4	3
180	0.49	2.9	1.08	3.1	1.35	3.2
200	0.48	3.1	1.06	3.3	1.3	3.4
230	0.43	3.5	1	3.5	1.25	3.7

Aquatec Submersible Well Pump Setup

“Open Tank” Set Up

Pump is set up to run without batteries. Pump runs when the sun shines and pumps into an open tank which gravity feeds to your home.

“Pressure Tank” Set Up

Pump is set up to run on batteries which are charged by solar modules. Pump runs when pressure drops in the pressure tank.