

PV-Powered Pumps

- Solar powered pumps have been in mass production since 1983, providing an alternative to high maintenance fuel-burning engines, windmills and labor intensive hand pumps.
- Thousands of systems are at work around the world, providing water for remote homes, villages, livestock, medical clinics and more.

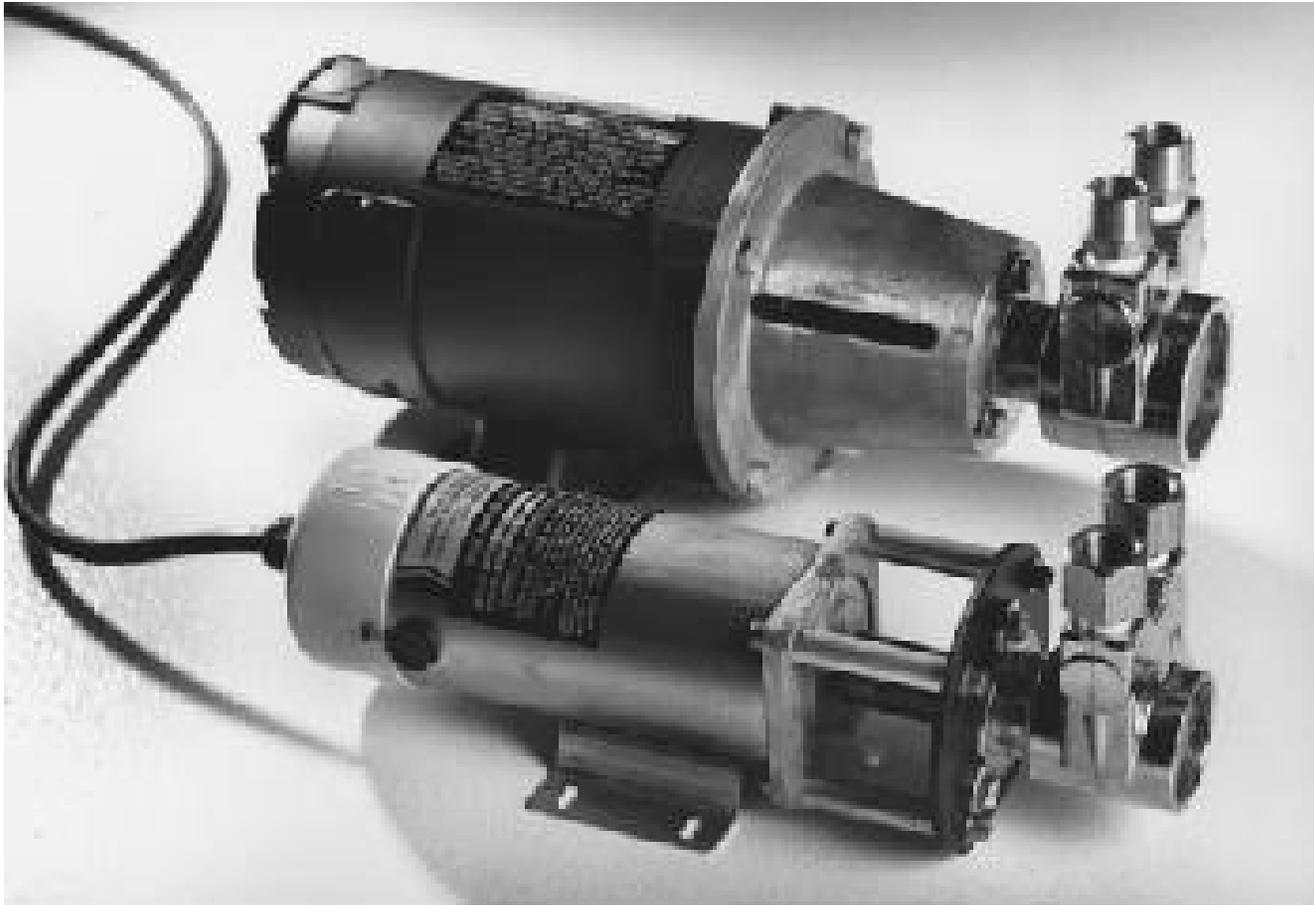
Solar Water Pumps...NOT your average pump!

- Solar water pumps are designed to use DC power directly from the solar modules.
- They are much more efficient than an equivalent AC powered pump.
- The pump controller acts as an automatic transmission between the solar modules and the pump, optimizing low light operation.
- Some newer versions use a variable frequency AC motor driven by a 3 phase pump controller which is powered by the solar modules.

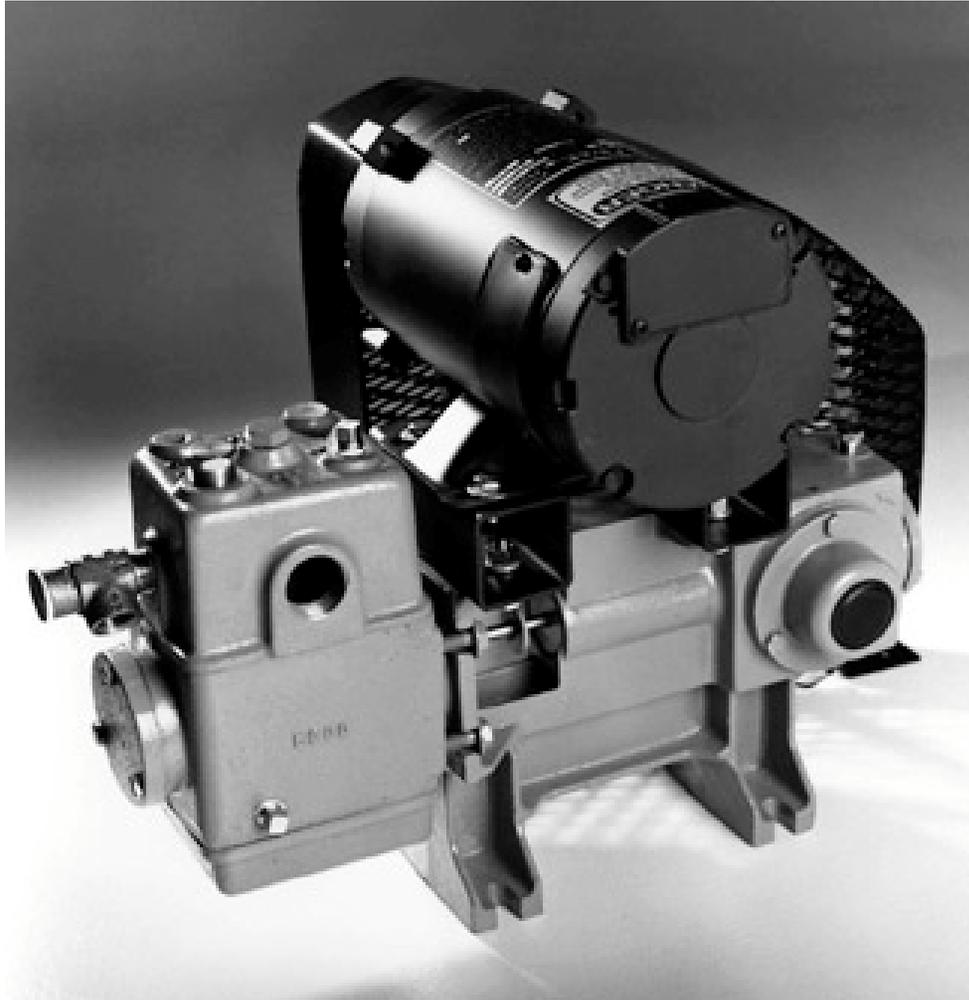
Solar charge controller and LVD in an outdoor rated enclosure



Surface pumps



Dankoff Solar Slow Pumps – 0.5 to 4 gpm



Dankoff Solar Force Piston Pump

- **lift up to 230 ft.**
- **up to 9 gpm**

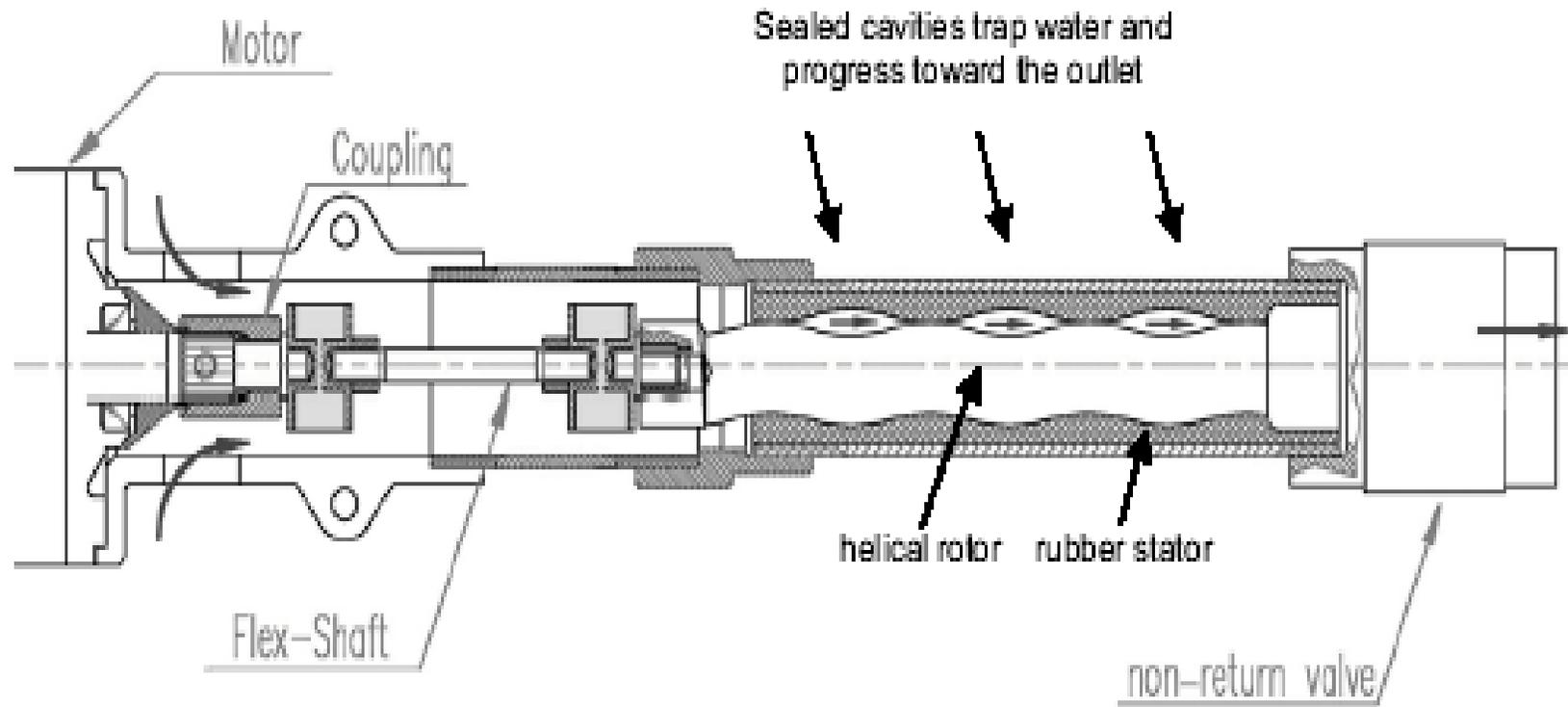
Submersible Pumps



- Can lift from as deep as 600 ft.
- Up to 13 gpm flow rate or 15,000 gpd

Side view of a helical rotor submersible

ETAPUMP – HELICAL ROTOR MODELS ONLY





ETA solar pump being installed in a 160' well

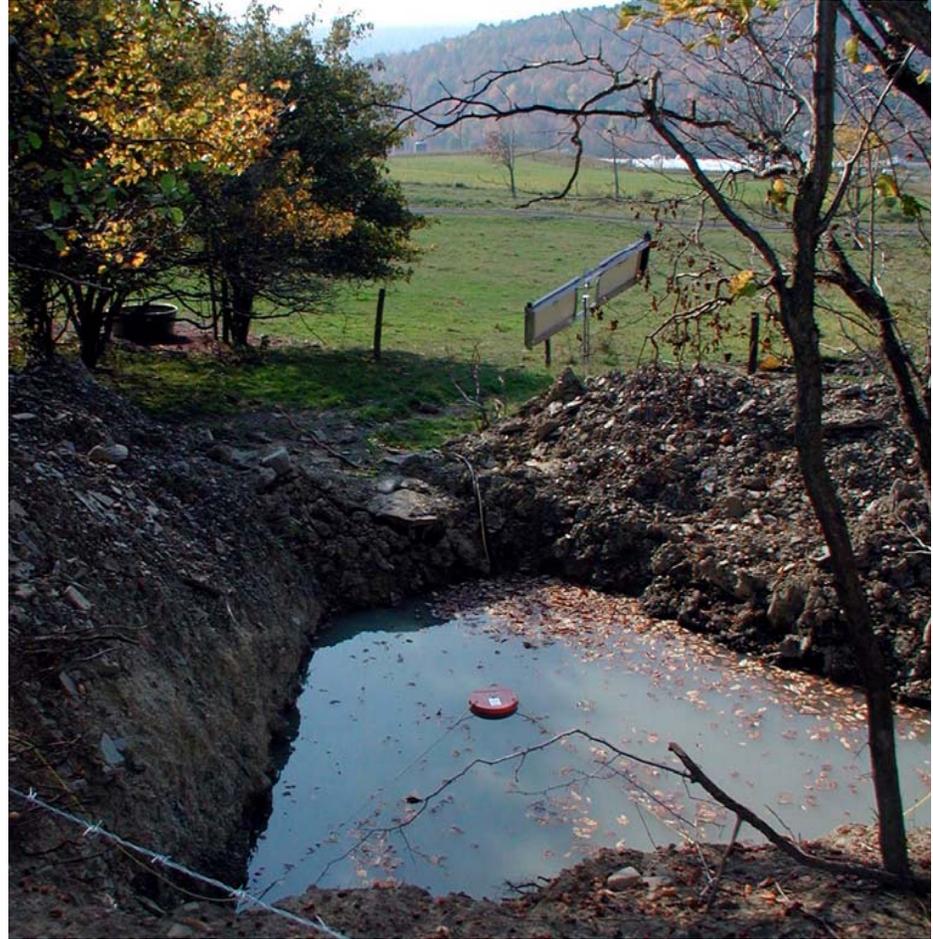
Near Ithaca, NY

Floating pumps

On a stream



In an improved spring



Submersible Pump System at ASC Tech Farm

