OASIS SUB PACKAGE

PD Solar will design the most cost effective turnkey solar water pump stations that meets your needs. Depending on your geographic location, our design team specifies the optimal pump and solar PV modules combination to match your pumping requirements.

One Multi Stage Pump
Entirely made of AISI 304 stainless steel (centrifugal models).

or

One Helical Rotor Pump
(helical rotor model).

and Two Solar PV Panels
and a 8 feet flat cable length with a water level sensor.

1. SOLAR PANEL

Our solar modules deliver superior power output in a variety of temperature and irradiance conditions, and the self-cleaning anti-reflective coated glass reduces soiling to help maximize power output. Performance is backed by the manufacture’s 25-year linear production warranty.

Qualifications & Certificates UL 1703, CEC
2. THE PUMPS

NERA SOLAR is the most compact and reliable solution for your solar pumping applications.

**4” Submersible Centrifugal Pump**
- Impellers and diffusers in stainless steel AISI 304.
- Built-in stainless steel AISI 304 check valve.

**4” Submersible Helical Rotor Pump**
- Highest hydraulic efficiency due to helical rotor impeller.
- Hard chromed rotor.
- High quality EPDM stator.

**Motor**
- High efficiency permanent magnet motor.
- Stainless steel AISI 304 stator fully encapsulated in resin.
- Encapsulated water cooled motor.
- Kingsbury thrust bearing.

**Encapsulated Inverter**
- High efficiency encapsulated inverter.
- MPPT for maximum flow in all insolation conditions.
- Overcurrent, overheating and dry-run protection.
- Removable power cable.
- Water level sensor.

**Other Pumps Features:**
- Max. temperature of pumped liquid: 92 °F (35 °C).
- Min. speed of water flow on motor case: .2 m/s.
- Characteristics of pumped liquid: Clean, non-corrosive, non-explosive, free of particles and fibers, with a maximum sand content of 50 g/m3.
- Grade of protection: IP68.
- Used materials: Pump and motor body in AISI 304.
- Cable: Flat cable ACS-KTM-WRAS approved.
- Supply voltage: 70-190 VDC.
- Max. input power: 800 W.
Performance Information and Curves

NERA pumps are fed by DC voltage with wide margins of operating voltage (70-190 VDC).

In the application with photovoltaic panels, the MPPT algorithm maximizes the electric power obtained from the panels thus the amount of water extracted.

Pump speed is adjusted in relation to solar irradiation.

When solar irradiation increases, pump will run faster thus pumping more water.

When solar irradiation decreases (clouds moving or different hours of the day) pump will reduce its frequency and so delivery but it continues pumping until solar irradiation reaches the minimum value necessary for working.