INTELENERGI
Lightening Your Tomorrow

ISO 9001 2015 CERTIFIED

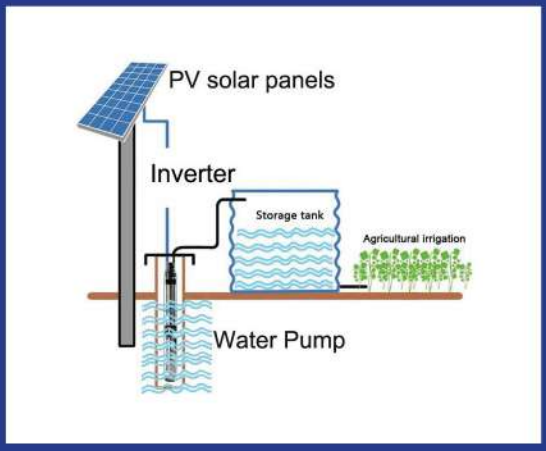
Solar Surface Water Pumps

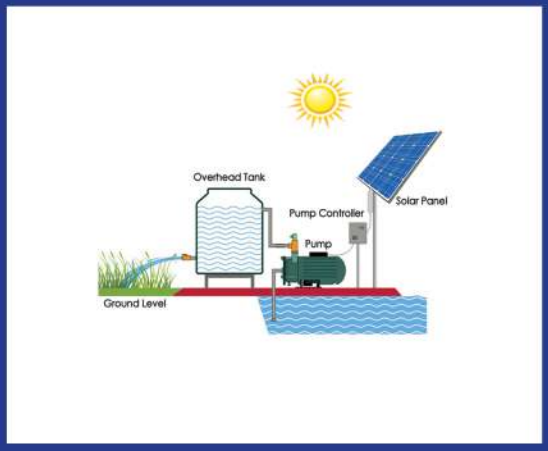
- Smarter Solar Powered Water Supply
- All Weather Technology
- Standalone System
- Highly Reliable & Very Efficient Design
- Simply More Water

Principal

- Solar photovoltaic systems are energy conversion systems, which convert solar energy into electrical energy.
- Solar photovoltaic system operates on the basis of the photovoltaic effect in a silicon junction diode designed to facilitate the collection of usable magnitudes of electricity.
- Numbers of cells are string up in series to generate power at usable voltages.
- The solar panel contains solar cells which produce electricity when exposed to sunlight.
- A solar water pumping system essentially consists of a solar photovoltaic panel which powering a water pump through the pump controller.

Schematic Working Principal





A solar powered water pumping system is composed of several PV (photovoltaic) panels. Solar cells are the building block for solar panels.

The DC current is collected via the panel. This DC current is used to run the pump which pumps water whenever the sun shines and the excess water could be stored in an overhead water tank for the later usage .

The Photovoltaic water pump controller regulates the output current in accordance with sunlight intensity to achieve the maximum power point tracking (MPPT), maximizing the use of solar energy

Benefits of Solar Water Pumping Systems

- Clean and Pollution Free Energy, Eco Friendly.
- No fuel cost & minimum maintenance cost.
- High flow system for faster tank
- More economical than diesel pump sets in long run.
- MPPT- Maximum Power Point Tracking for maximizing efficiency of input power.
- Enable cultivation of extra crop
- Help in providing critical protective irrigation in water scare areas.
- Save times & labor.


Agriculture


Irrigation


Livestock Watering


Pond Aeration


Drinking Applicationst


Home Water System

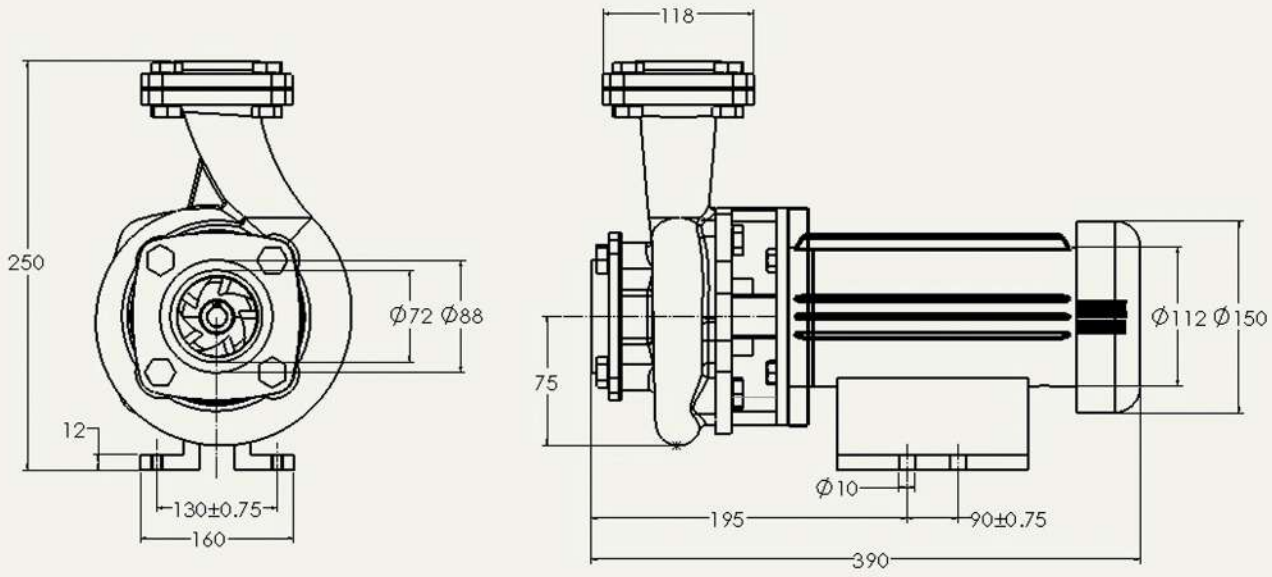
Product Introduction

ETG Surface pumps are most efficient and reliable solution for conditions where the suction head is limited to 7 meters. Surface pumps are of Mono Block construction with the impeller mounted directly to motor shaft.

Solar DC, Surface Water Pumps

Series: ASP1HP10M			
Model	900Wp	1200Wp	1800Wp
Rated Head(mtr)	10	10	10
Discharge (M3/Hr)	12.8	22.8	25.7
Shut of Head (mtr)	12	15	15
Array Rating	900Wp	1200Wp	1800Wp
Motor Efficiency	≈ 80%	≈ 80%	≈ 80%
Ambient Temperature Range	upto 50° Cel		

Dimension of Solar Surface Pump



Preferred Solar Array

300Wp- 320Wp (72 Cells)	
Vmax	37V-37.15V
Voc	44.5V-45.8V
Imax	7.7A-8.63A
Isc	8.5A-9.1A

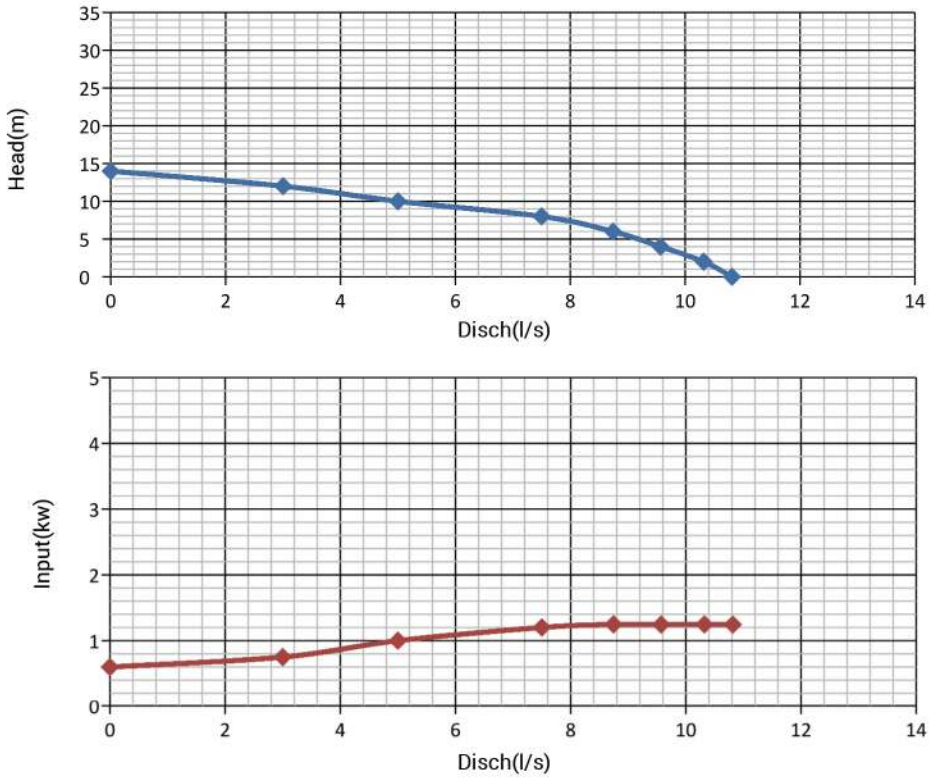
Specification of Solar Pump Controller

Input PV Array	1200W-1280W
Input Voltage (Vmp)	144-148.4V
Open Circuit Voltage (Voc)	172.8-183.2V
MPPT Range (Vdc)	80V to 180VDC

Features of Controller

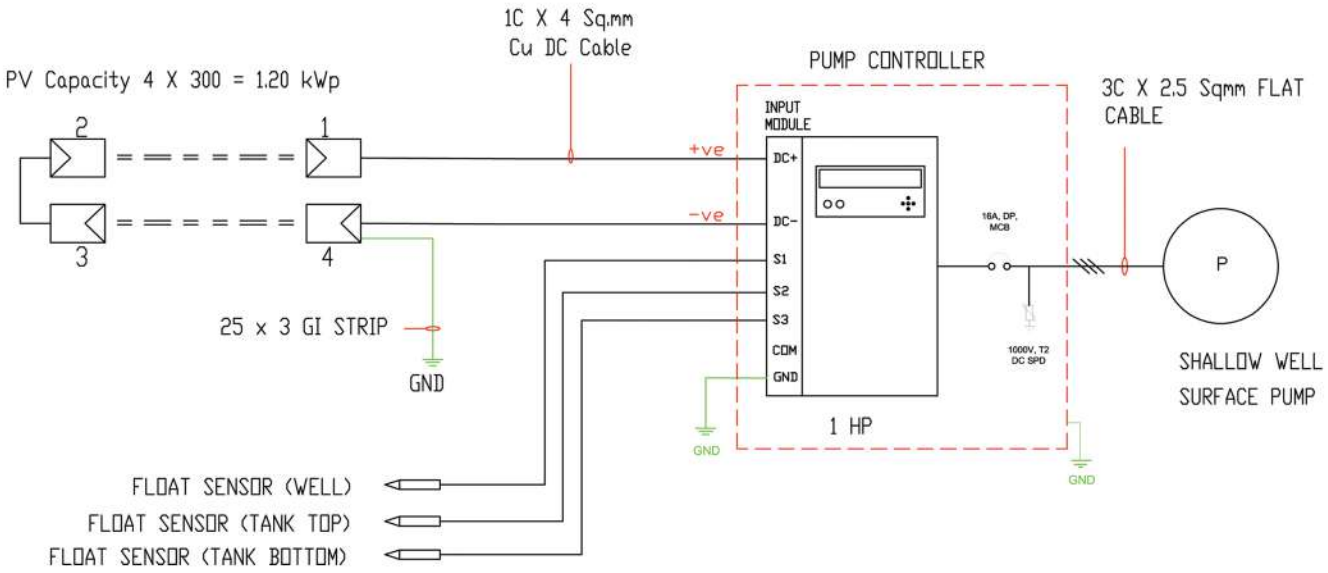
- MPPT based design
- Multiple fault diagnosis indications
- Fully enclosed with IP54 protections
- Protection against "Short Circuit, Open Circuit, Reverse Polarity, Dry Run , Over & Under Voltage protection

Performance Curves



- These curves are at 7 meters suction & 3 meter delivery

Schematic Diagram



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