



SOLAR PUMPS



...solar is the future

→ What is Solar Pump?

A Solar Pump has PV panels that convert solar energy into electricity that drives motors and pumps. Thus, water from the resources can br drawn using solar energy.

→ Why Solar Energy is considered as future?

Demand of electricity across the globe is increasing at a significant rate while simultaneously the energy generation resources are on a decline. Alongside, the major energy resources currently available are limited and they produce pollutants which negatively impact the climate.

Solar Energy is the most efficient, non-polluting and never ending energy resource available across the globe. Hence, majorly every government across the globe are working towards increasing generation and use of Solar Energy.

→ Why is Solar Energy considered most cost-effective?

Setting up Solar Panels is a one time investment which delivers profits year after year for long life.



Why Solar Pump & how does it work?

With Solar pump a farmer can cultivate 3 crops per year which earlier was not possible mainly because of lack of power availability or costlier operational cost in case of diesel pumps. Solar pumps enable crop irrigation during daytime because they generate energy from sunlight.

Solar pumps operate using three main components. Solar cells collect the sun rays and convert them into usable electricity. These cells are usually covered in silicon or another semiconductor material that produces direct current electricity. Wiring moves the electricity from the cells to the pump and the pump does the work of moving the water. As sun rises, intensity in sunlight slowly increases and starts driving a pump say 1-2hours after sunrise. Current and pump flow increase from morning to noon and then decrease from noon to evening.



Solar Energy - Green Energy

Benefits of Solar Pumps

- ✓ One time investment delivers profit year after year
- ✓ Freedom from unreliable grid power driven pumps
- ✓ No motor burnouts / transformer burnouts
- ✓ Zero running cost
- ✓ Trouble free maintenance (majorly cleaning & protection)
- ✓ Zero pollution
- ✓ Easy to operate in remote areas
- ✓ No monthly bills / cost





SOLAR

ADVANTAGES

SALIENT FEATURES

- ✓ High Efficiency Solar PV Modules
- ✓ Flexible Mounting Structure
- ✓ Solar Pump Control Unit with provisional modern features
- Provision for grid supply
- ✓ 50 / 60 Hz output & suitable energy efficient pumpsets
- Protection against dry run, short circuit, Overload, 1phase stall funtion & earth fault

- ✓ Agriculture Irrigation & Sprinklers
- ✓ Domestic Supply
- **Pressure Boosting Systems**
- Civil, Industrial & Mining

- Eco-friendly
- ✓ Zero running cost
- Less Maintenance (can be manually handled)
- ✓ Low Total cost of ownership
- ✓ Long life PV Modules

Power your future...



TECHNICAL SPECIFICATION

PUMPSET

- Head Range 5m to 250m
- Flow Range 15,000 lpd to 7,90,000 lpd
- Pumpset Models Borewell Submersible & Openwell Submersible
- Avail. Range in kW (HP) 0.75 kW to 7.5 kW (1.0 HP to 10 HP)
- Input Power Supply 3 phase, 380 V or 415 V, 50 Hz AC Supply

PV Modules

- Type of Modules Multi (Poly) Crystalline (Standard) or Mono Crystalline
- Wp Range 20 Wp to 300 Wp

SOLAR PUMP CONTROLLER UNIT

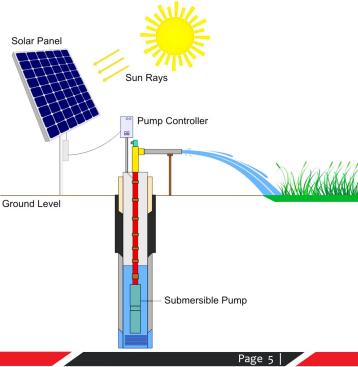
- Avail. Range in kW (HP) 0.75 kW to 7.5 kW (1.0 HP to 10Hp)
- Standard Provisions Solar Pump controller unit with built-in MPPT Algorithm | Display - LEC or LCD | Visual indications for motor start / fault trip | Auto or Manual
- Grid or Generator supply input besides Solar Power Supply with change over switch
- Frequency 50 Hz or 60 Hz output option (Field Settable)
- Standard Protections Dry Run | Short Circuit | Overload | 1 Phasing stall function | Farth fault
- Protection Class IP 52
- Optional Remote Monitoring Systems | Protection against lightning

MOUNTING STRUCTURES

- Standard Fixed Tilt Mounting Structures (to withstand wind speed upto 150 km/hr) Hot dipped galvanized
- Optional 1 Axis, 2- Axis Auto or Manual Solar Tracking Systems (for increasing the efficiency of the solar pumping system by 20-25%)



SOLAR PUMP



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