

BLDC Solar Pumping System



Drip Irrigation



Stand alone Pumping



Drinking Water Pumping



Rural drinking water supply



Dual Pump (Hand + Solar)



Irrigation

Jain Irrigation has developed highly efficient permanent magnet brushless DC motor, intelligent controller and data monitoring system. BLDC pump works in low radiance also. It starts early in morning and remains on till late in the evening.

BLDC Solar Pump Models

Pump Capacity			Surface		Submersible			
Sr.	SPV Array Wp	Pump kW (hp)	Pump Output in LPD using manual tracker					
			10 m	20 m	30 m	50 m	70 m	100 m
1	1200	0.74 (1)	120000	60000	42000	25200	16800	11400
2	1800	1.5 (2)	180000	90000	63000	37800	25200	17100
3	3000	2.2 (3)	300000	150000	105000	63000	42000	28500
4	4800	3.7 (5)	-	-	168000	100800	67200	45600
For Drinking Water application								
Sr.	SPV Array Wp	Pump kW (hp)	30 m	60 m	90 m			
1	900	0.74 (1)	20000	10000	5000			

- Note: 1) Above figures are based on the "Average Daily Solar Radiation" condition of 7.15 kWh/m² on the surface of the PV array.
 2) System installed on automatic single axis tracker gives 20-25 % more water output per day as compared to fixed structure and 10-12% more output as compared to manual tracker.



Jain Solar DC Agriculture Pumping System

Features

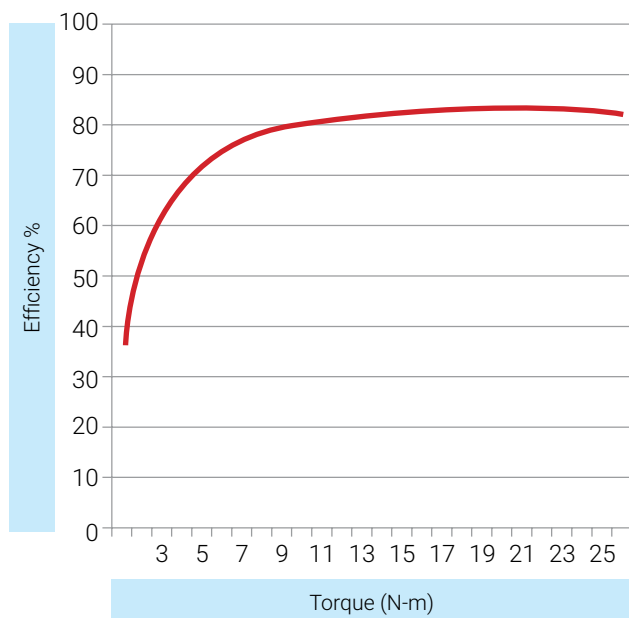
- Advanced permanent magnet brushless technology, high efficiency
- Low-maintenance
- High efficiency electrical design (low operation cost, cooler winding temperature)
- Complete Stainless steel
- Hermetically sealed stator, anti track, self healing stator resin prevents motor burn out
- No electronics inside motor
- Removable lead connector
- Double oil seals (shaft seals) for better protection against sand
- Prefilled with special non-contaminating and antirust solution
- Degree of protection: IP68
- Pressure balanced design
- Hydrodynamic journal bearings
- Hydrodynamic robust thrust bearing
- Materials of construction : Perineum stainless steel, Low loss silicon stampings, High magnetic density permanent magnets, corona resistant winding wires, rubber & cable drinking water approved
- Mounting : Vertical / max 30° inclination to water surface
- Compatible for Submersible pump sets as per IS8034:2002
- Motor head as per IS9283:2013
- 100% tested on state-of-the art computerized inhouse facility
- Performance test approval : MNRE, UL & TUV



Available Range

0.74 kW to 7.5 kW (1 hp to 10 hp)

Load Vs Efficiency Curve - Test Results for 3.7 kW (5 hp) BLDC Motor



Jain Solar Pumping System

Features

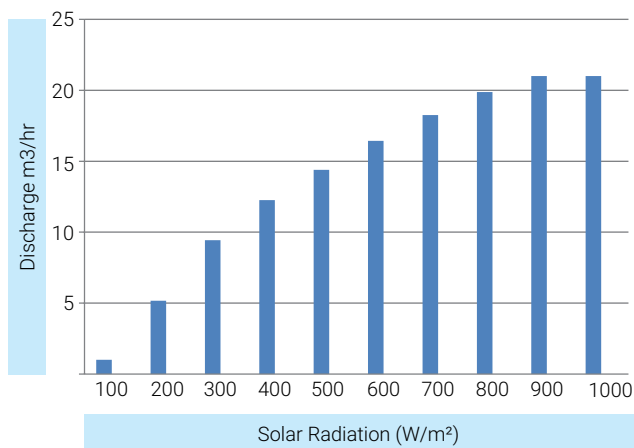
- Stainless steel construction designed and built for years of trouble free operation.
- Long service life as all components are made of stainless steel.
- High efficiency.
- Smooth safety hook.
- Mounting specifications are according to NEMA standards.
- High quality shaft bearings providing low friction and high wear resistance.
- Heavy duty stainless steel impellers & diffusers ensuring optimal performance.
- Stainless steel strainer to restrict the entry of sand and other extraneous material.
- A high strength stainless steel coupling facilitates a proper pump/ motor alignment.
- Inbuilt NRV (Non Return Valve)



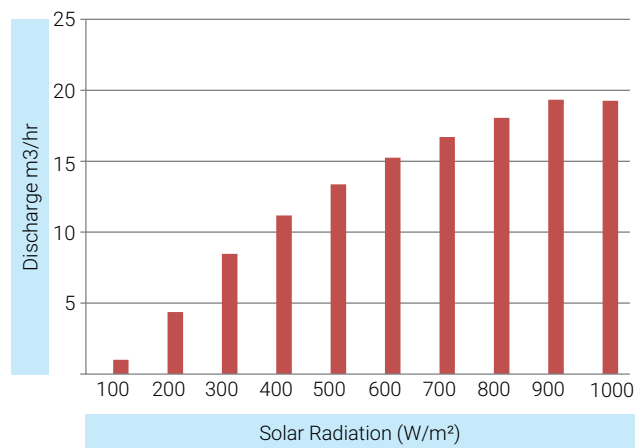
Available Range

0.74 kW to 7.5 kW (1 hp to 10 hp)

Radiation Vs Discharge Curve for BLDC Pump



Radiation Vs Discharge Curve for AC Pump



Solar Pump installed at Jain Tissue Culture Park, Jalgaon

BLDC Solar Pump Controller



Features

- Fully Automatic ON/OFF
 - Operates on solar radiation, automatically gets ON when sun rises and OFF at sun set
- High efficiency power electronics
 - Maximum water discharge
 - Minimum power loss
- Maintenance free
 - Sensor less protection against dry running
 - Electronics designed with long life components
 - Naturally cooled power electronics
 - Appropriate inbuilt protections against faults
- Wide operating voltage range
 - Provide more operating hours in a day, even operates in cloudy conditions
- Adaptable in varying climatic conditions
 - IP65 Enclosure
 - Suitable for outdoor installation
- User friendly interface
 - Screw less connection
 - Inbuilt emergency power disconnect switch
 - Digital display for operating parameters
 - Remote ON/OFF through mobile phone
 - Bluetooth interface
 - SD Card Connectivity
 - Online and offline data downloading
- Inbuilt Remote monitoring system
 - Parameters such as module voltage, current, power, energy generated, Pump RPM, UP time and OFF time can be remotely monitored through web portal www.jains.com
 - Local or offline data available and can be downloaded through mobile App
 - Dedicated web portal for live data monitoring, with graphical and tabular parametric data
 - Historical data is available on web portal
 - Report generation facility
 - Fault logging
- CE compliance - Conforms to CE requirements
 - Ensures user safety. Since system is powered by high voltage and operating in the outdoor fields



Specifications: 3.7 kW (5 hp)

Sr.	Parameter	Specifications
1	System wattage	1800 to 4000 W
2	Startup Voltage*	150 V
3	Input Voltage Range	160-350 Vdc
4	Output Voltage Range	60-190 V ECPWM
5	Minimum RPM of Motor	900
6	Maximum RPM of Motor	3300
7	Electronics Efficiency	>= 95%
8	Operating Temperature Range	-20° to 60° C
9	Storage Temperature Range	-20° to 85° C
10	Dimensions (l x w x h)	482 x 337 x 260 mm
11	Weight	13 kg approx.

* At start up voltage controller unit will wake up and motor will start running if sufficient power is available

Protections

- **Panel reverse polarity protection:** The controller is protected against PV panel reverse polarity condition.
- **Overload protection:** During overload condition, the controller will turn off automatically.
- **Dryrun protection:** In case of very low water level, the controller will turn off. It will start automatically after 20 minutes if water level increases.
- **Tank full protection (optional):** To prevent overflow of water, the controller will turn off automatically when the tank is full.
- **Short Circuit Protection:** In case of a short circuit in motor winding or in the connecting wires, the controller will automatically turn off.
- **Motor jam or Open:** If the motor is jammed or if the winding or connecting wires are open circuited, the controller turns off temporarily for 2 minutes. After 2 minutes, the controller will try to start after re-checking the system condition.

Available Range

0.74 kW to 7.5 kW (1 hp to 10 hp)

Data Logger with Remote Monitoring

JISL offers unique solutions for remote monitoring, data logging and data representation of solar pump. Most of the solar pumps are located at remote places. JISL has its dedicated cloud server for remote monitoring. RMU receives data from pump controller and send it to cloud via GSM modem.

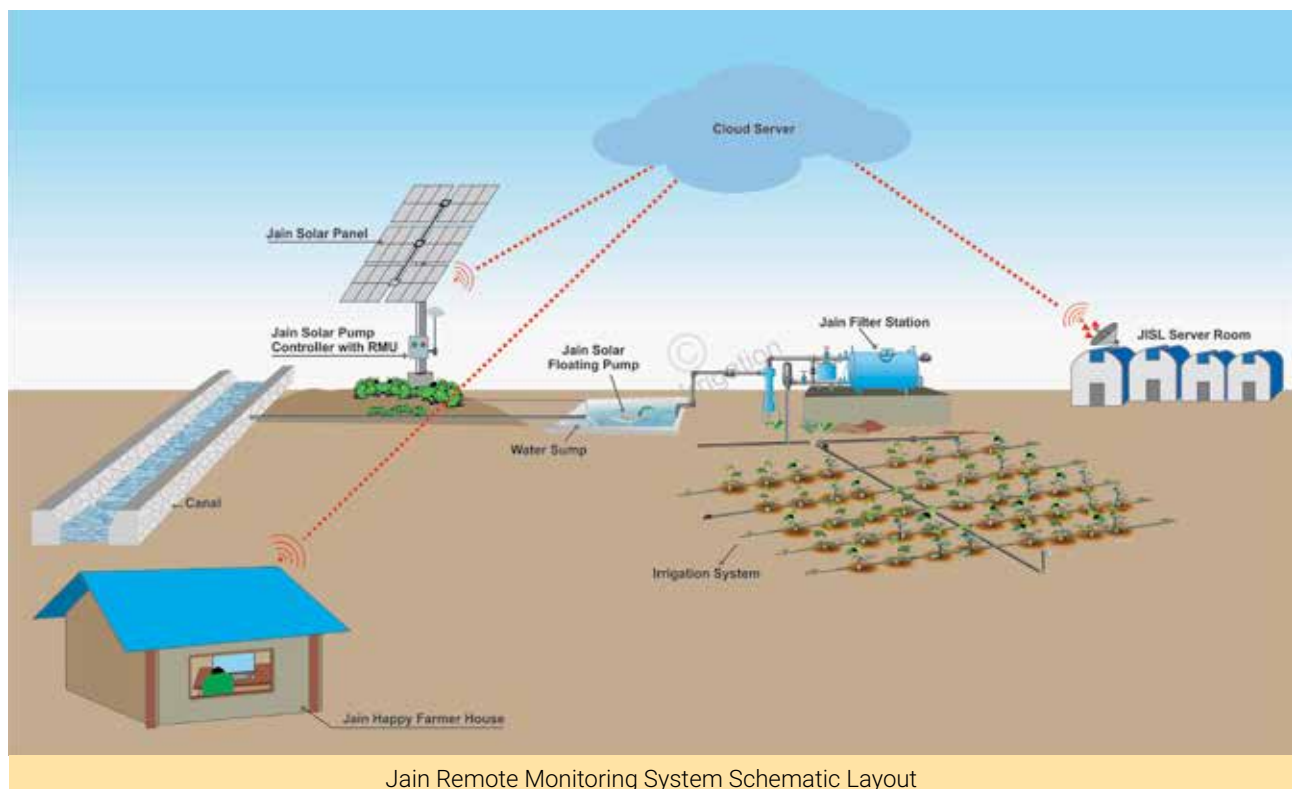
Features

- Fully automatic operation
- Communicates with Jain Solar Pump system to collect all operational, fault and status information periodically
- Captured data is stored on a remote server for one year duration which can be accessed through World Wide Web
- Simple tabular view of data records on data viewing software while allowing historical view of records
- Built-in retry and buffering mechanism to transfer data to the server to mitigate low signal strength and temporary GPRS service outage problem
- Remote monitoring of solar pump system provides solar pump data and fault alerts on server. Person sitting anywhere in the world can see the performance of system



Operational Parameters for Remote Monitoring

- 1) PV array Voltage
- 2) PV array current
- 3) Power
- 4) Energy generated
- 5) Pump RPM
- 6) Faults or Events (if any)
- 7) Pump on/off status
- 8) Pump ON Time and OFF Time
- 9) Discharge



Jain Thread Loc Plus

- Skid Free Joint
- Anti Rotational mechanism
- Vibration absorbing mechanism
- No effect of pump's ON/OFF rotational jerk on column pipes life and functionality
- Inexpensive, quick and hassle free installation
- Safe for potable water application

Available Range

- 1" to 4" in
- Copper
- Bronze
- Silver
- Gold
- White Gold
- Diamond
- Platinum

For depth on installation from 150 feet to 1500 feet



Jain Thread Loc Plus



Jain PE Coils

- Only Indian company to manufacture PE Coils from 16mm to 160 mm
- Pipes available in pressure class of PN 2.5 to PN 25 kg/cm²
- Pipes available in material grade PE63, PE 80& PE 100
- Pipes available in ISI, ISO and DIN standard
- Pipes are UV stabilized, high crack resistance
- India's largest exporter of HDPE Pipes



Jain PE Coils

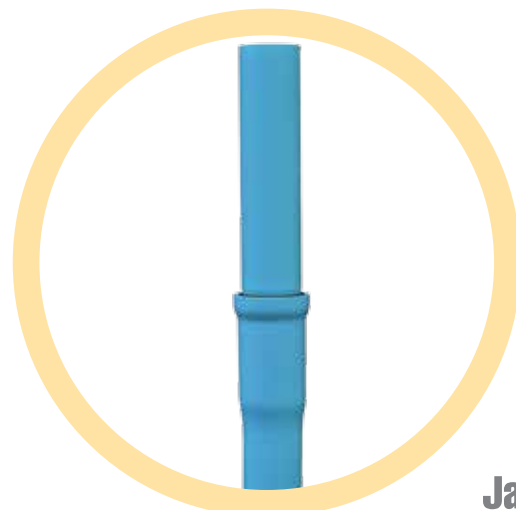


Jain Riser Pipes

Jain uPVC Riser pipes for India Mark II & Mark III Hand pumps are unique in design with dual socket arrangement to make a perfect sealing arrangement without compromising the pipe strength.

Features & Advantages

- Very light in weight
- Easy to handle
- Easy to assemble and disassemble
- No mechanical tools required
- Perfect sealing is achieved
- No corrosion of pipes
- No contamination of water
- Longer life of the system
- Initial cost is low
- Maintenance cost is low



Jain Riser Pipes

