

| | |
|--------------|--------------------------------|
| Nominal Flow | 2.0 m ³ /hr @ 100 m |
| Flow Range | 2.8 ~ 5.8 m ³ /hr |
| Head Range | 30 ~ 90 m |

Solar pumping System

Note:

Solar motor powers the new system for the supply of clean water based on the most widely available renewable energy, the sun. It is designed for easy use and requires no maintenance. It is the ideal solution for supplying water in remote areas, where the normal power supply of electricity from the power grid is inconsistent or completely unavailable

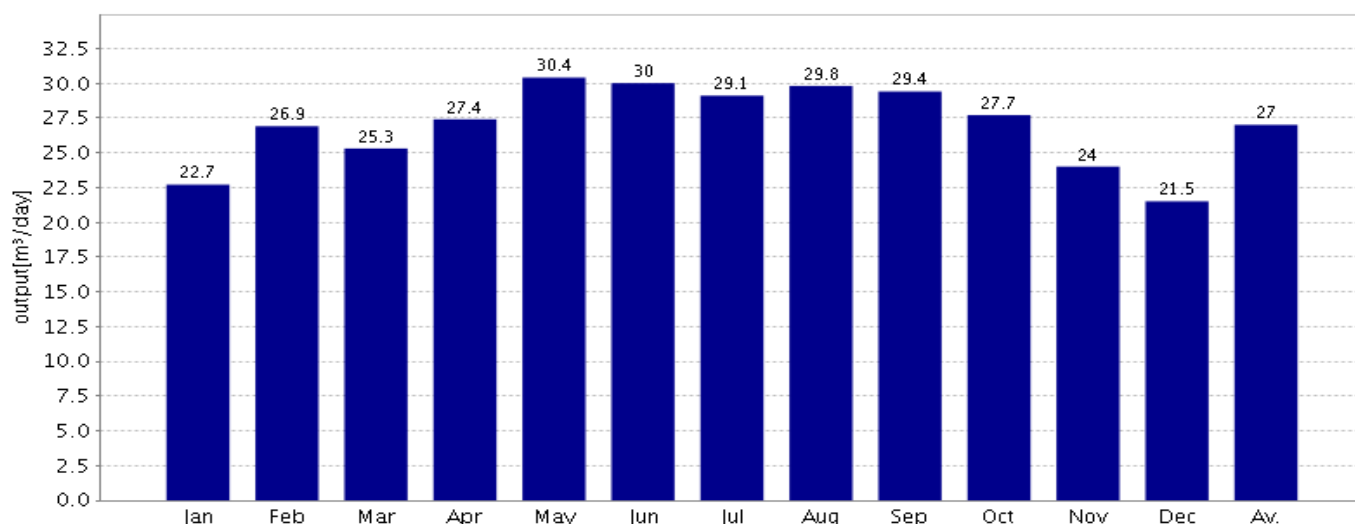
Parameter

| | | | | | |
|------------------------|-----------------------------|--------------|------|---------------|-----|
| Location: | United Arab Emirates;Du bai | Water Temp: | 25°C | | |
| Required daily output: | 20m ³ /day | Dirt loss: | 3% | Motor lenght: | 50 |
| Pipe type: | Plastic | Static Head: | 70m | Pipe length: | 20m |

Products

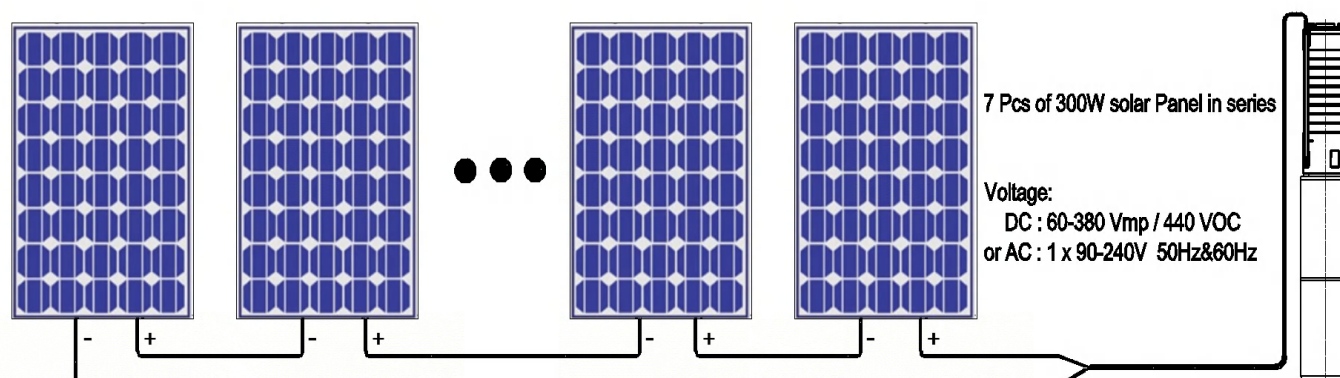
| | |
|------------------|-------------------------|
| Submersible pump | 1pc;4SP3-11 (2HP AC&DC) |
| Solar panel | 7pc;2100Wp;300w ×7pcs |
| Motor cable | 50m*2.5mm ² |
| Pipeline | 20m;Pipeline |
| Accessories | |

Daily output in average month (27.0) m³/day

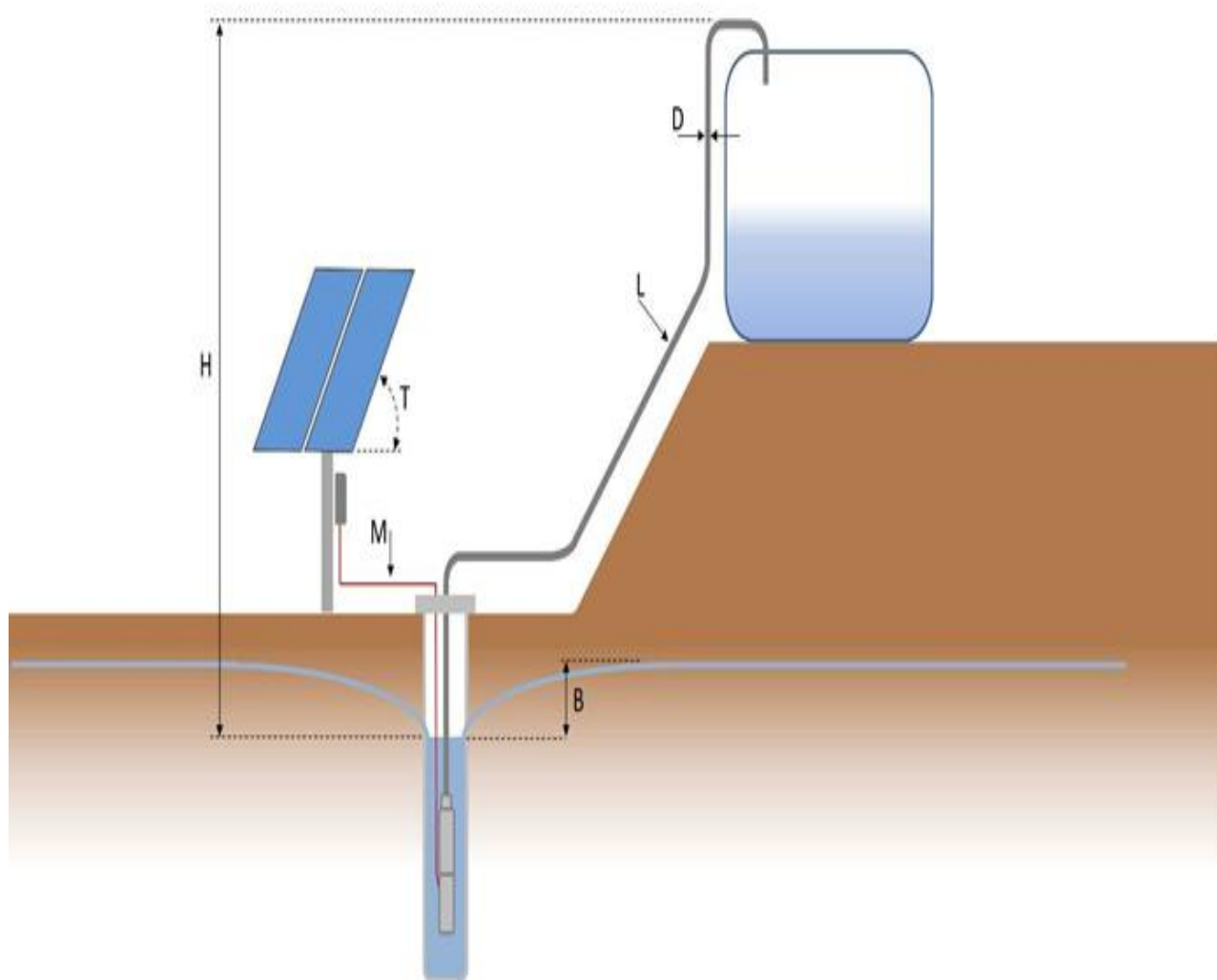


| | | | | | | | | | | | | | |
|----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|
| Energy[kWh] | 10.36 | 12.27 | 11.53 | 12.51 | 13.87 | 13.70 | 13.29 | 13.61 | 13.44 | 12.64 | 10.94 | 9.79 | 12.32 |
| Irradiation[kWh/m ²] | 5.48 | 6.49 | 6.10 | 6.62 | 7.34 | 7.25 | 7.03 | 7.20 | 7.11 | 6.69 | 5.79 | 5.18 | 6.52 |

Solar Panel Wiring



Sizing Layout



| | |
|-------------------------------------|--|
| H (Static head): | Vertical height from the dynamic water level to the highest point of delivery. |
| B (Drawdown): | Lowering of water level depending on flow rate and recovery rate of the well. |
| D (Pipeline inner diameter): | |
| L (Pipe length): | Entire pipeline from the pump outlet to the point of delivery. Elbows and armatures must be added as an equivalent length of pipeline. |
| M (Motor cable): | The cable between controller and pump unit. |
| T (Tilt angle): | Angle of the PV generator surface from the horizontal plane. |

4SP3-11 (2HP AC&DC)

Solar Submersible Pump System

System Overview

| | |
|---------------------------|---------------|
| Head | max. 110m |
| Flow | max. 106L/min |
| Recommend Max input Power | max. 2.2 kW |
| Minimum well diameter | min 4" inch |
| Pump discharge | Rp 1.25" |
| Efficiency Max | 45% |

Product advantage

- .Stainless steel: AISI 304 (316 optional);
- .BLDC High Efficiency Motor;
- .MPPT Efficiency Max.99%;
- .Encapsulated water filled motor(No pollution risk);
- .Thrust bearing system;
- .Soft start running makes the system's life longer;
- .Hybrid Powered by AC/DC;50Hz&60Hz both working;
- .Wide voltage:1x90-240VAC;60-380Vmp/440VOC;
- .Built-in electronic make system more reliable;
- .Dry protection(No additional float sensor required);
- .Reverse protection(reverse + and - is fine);
- .Over-head protection(need monitor and flow meter);
- .Lighting and surge protection(need monitor);
- .Over voltage protection (need monitor)

Technical Data

Controller 4SP3-11 (2HP AC&DC)

- .Controller Built-in;
- .Losing-Phase protection;
- .Over-load/Over-current/Over-voltage/Over-power protection;
- .Over temperature protection.

Motor 4SP(0.5-3HP AC&DC)

| | |
|-----------------------|---|
| Voltage | AC 1×90-280V DC max.VOC 440V DC Vmp 60-380V |
| Current | max.AC 10A max.DC 12A |
| Motor Efficiency | max.88% |
| WaterTemp | max.40°C |
| Insulation class | F |
| Enclosure class | IP X8 |
| Submersion | max.150m |
| Required cooling flow | 0.8L/s |
| Connect Standard | 4"NEMA |
| Speed | 500-4000 |

Pump End

- .Stainless steel: AISI 304 (316 optional);
- .Non-return valve;
- .Centrifugal pump

Standards



Note:

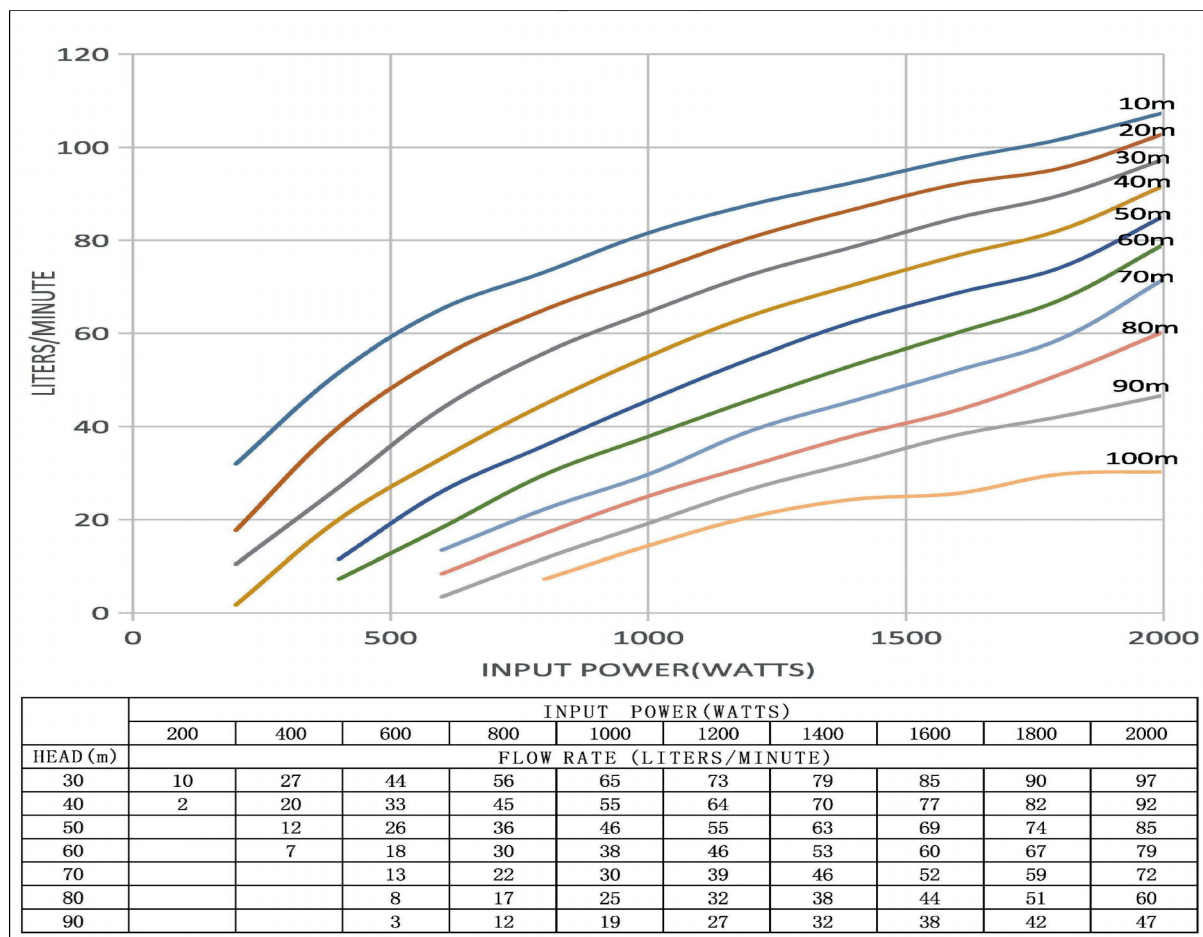
- *AC/DC switching needs to wait 1 minute;
- *Recommended 7 Pcs of 300W Solar Panels in Series;
- *VOC (V) Volts open circuit nothing connected;Vmp (V) Volts maximum power point under load;Exceeding limits may cause serious harm or irreparable damage.



4SP3-11 (2HP AC&DC)

Solar Pumping project

Pump chart



Dimensions and Weights

