

Solar pumping System

Note:

MAXIMA 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

Nominal Flow	4.2 m ³ /hr @ 20 m
Flow Range	2.7 ~ 6.0 m ³ /hr
Head Range	10 ~ 25 m

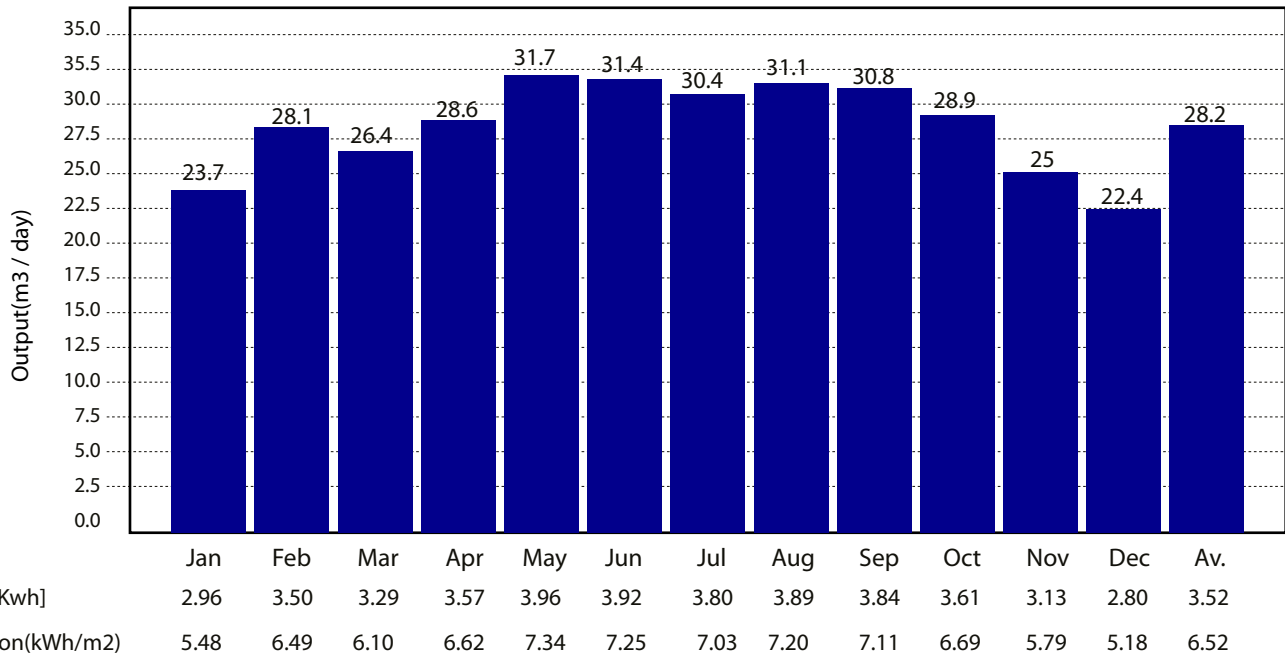
Parameter

Location:	UAE	Water Temp:	25°C		
Required daily output:	25m ³ /day	Dirt loss:	3%	Motor lenght:	50
Pipe type:	Plastic	Static Head:	15m	Pipe length:	20m

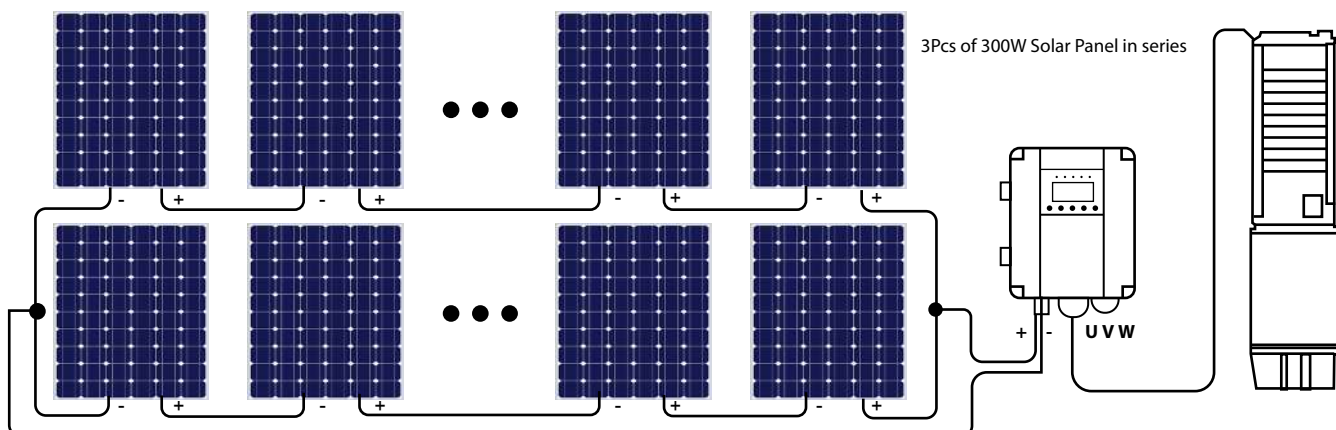
Products

Submersible pump	1pc;4SPW3-3A (0.5HP AC&DC)
Solar panel	2pc;600Wp;300w × 2pcs
Motor cable	
Pipeline	20m;Pipeline
Accessories	

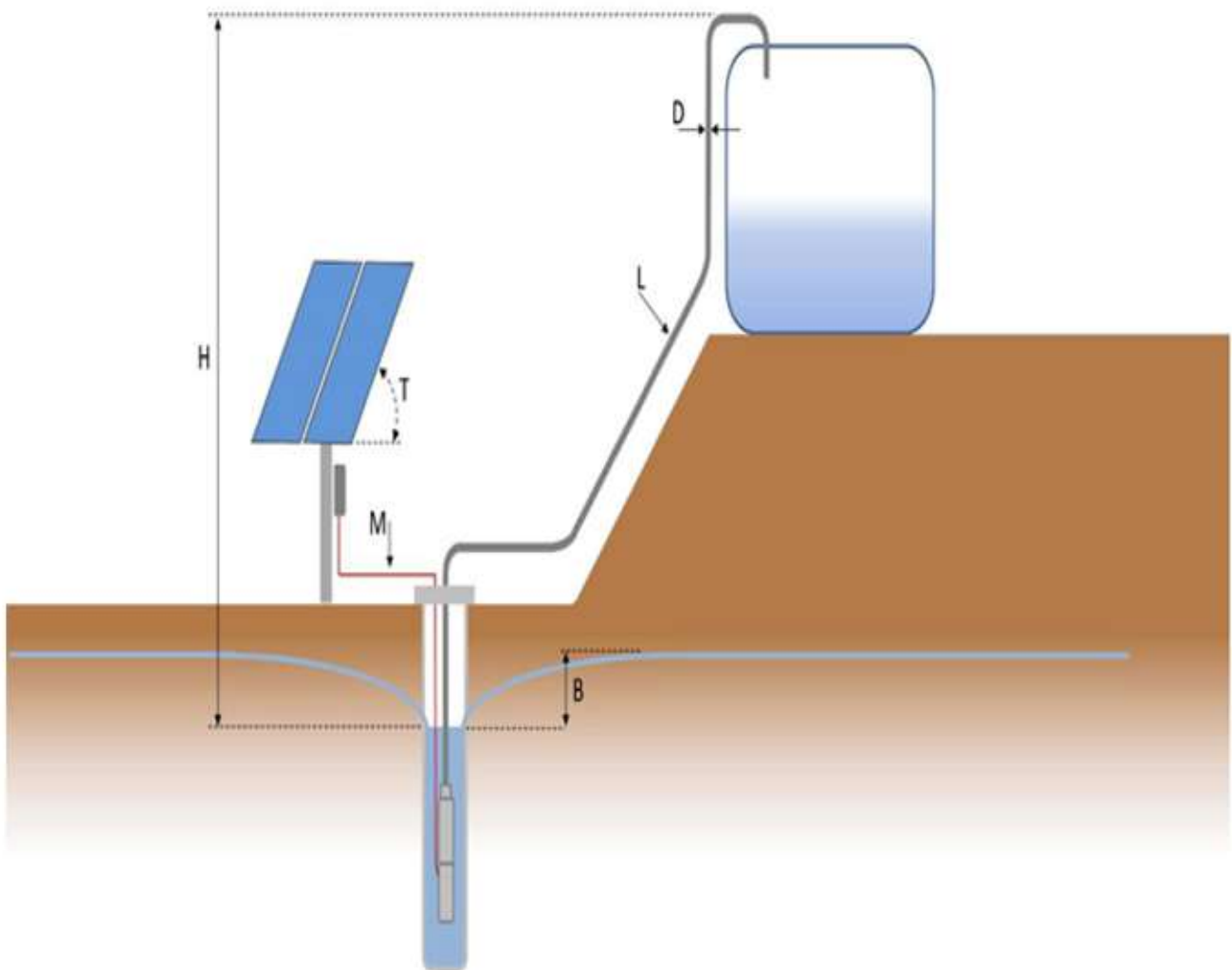
Daily output in average month (28.2) m³/day



Solar Panel Wiring

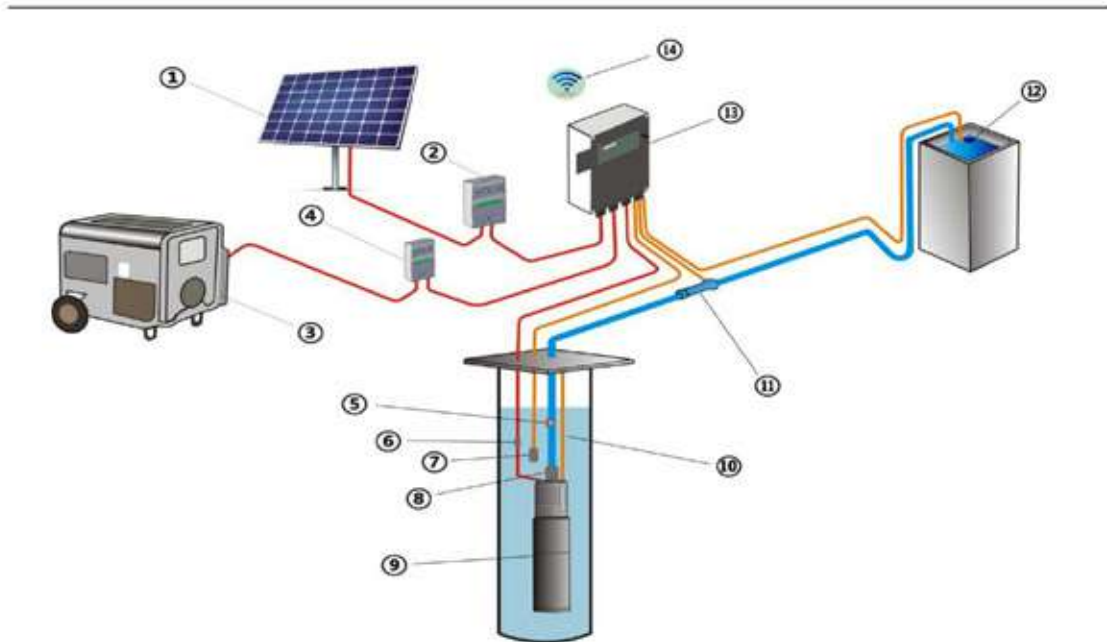


Sizing Layout



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. Ellbows 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.

System Layout



- | | |
|--|--------------------------------|
| 1. Solar panels | 8. Sacrificial Anode(optional) |
| 2. SPD(DC) Surge Protection Device(optional) | 9. Solar water pump |
| 3. Generator or Grid (optional) | 10. Traction rope |
| 4. SPD(AC) Surge Protection Device (optional) | 11. Flow meter(optional) |
| 5. Check valve (optional) | 12. Float Switch (For Tank) |
| 6. Wiring Package(Epoxy Resin Wiring Package or Heat Shrinkable Tube Wiring Package) | 13. Monitor(optional) |
| 7. Float Switch (For Dry Protection, Optional) | 14. GPRS (optional) |

NOTE

1. Please read the manual carefully for all installation accessories, Please contact factory if you need all the above accessories.
2. Float Switch for Dry Protection is Optional, Because the pump system has its own dry protection;
3. Monitor is not a necessary part of pump system .but it provides more functions and protections for pump system. Making the system more convenient and intelligent. For example intelligent switching of AC/DC power supply; Floating ball interface terminal etc.
4. The pump shall be installed at least 1.5m away from the bottom of the well:
5. It is recommended to install a check valve every 70m of the vertical height of the pipeline.

4SPK3-3 (0.5 AC&DC)

Solar Submersible Pump System

System Overview

Head	max. 30m
Flow	max 100L/min
Recommend Max Input Power	max. 0.9 kW
Minimum well diameter	min 4 inch
Pump discharge	Rp 1.25"
Efficiency Max	45%

Product advantage

Stainless steel: AISI 304

BLDC High Efficiency Motor,

MPPT Efficiency Max.99%

Encapsulated water filled motor(No pollution risk):

Soft start running makes system's life longer:

Thrust bearing system

Reverse protection (reverse + and - is fine):

Over load protection/over current protection/over power protection:

Voltage: 60-380V mp/450VOC: AC: 150-240V 50 Hz & 60 Hz

Dry Protection (No additional float sensor required)

AC and DC intelligent switching

Loosing-Phase

Overvoltage and other protection

Technical Data:

Controller 4SP3-3 (0.5HP AC/DC)

Controller External

Over load ? Over Current / Over Voltage / Over Power Protection

Loosing-Phase protection

Over temperature protection;

Motor 4SPK. (0.5-3HP AC&DC)

Voltage	AC 1x90-280V
	DC max. VOC 440V
	DC Vmp 60-380V

Current	max. AC 10A
	max. DC 10A

Motor Efficiency max 85%

WaterTemp max 40°C

Insulation class F

Enclosure class IP X8

Submersion max. 150m

Speed 500-4000



Pump End

Stainless steel: AISI 304 ;

Non-return valve:

Centrifugal pump

Standards



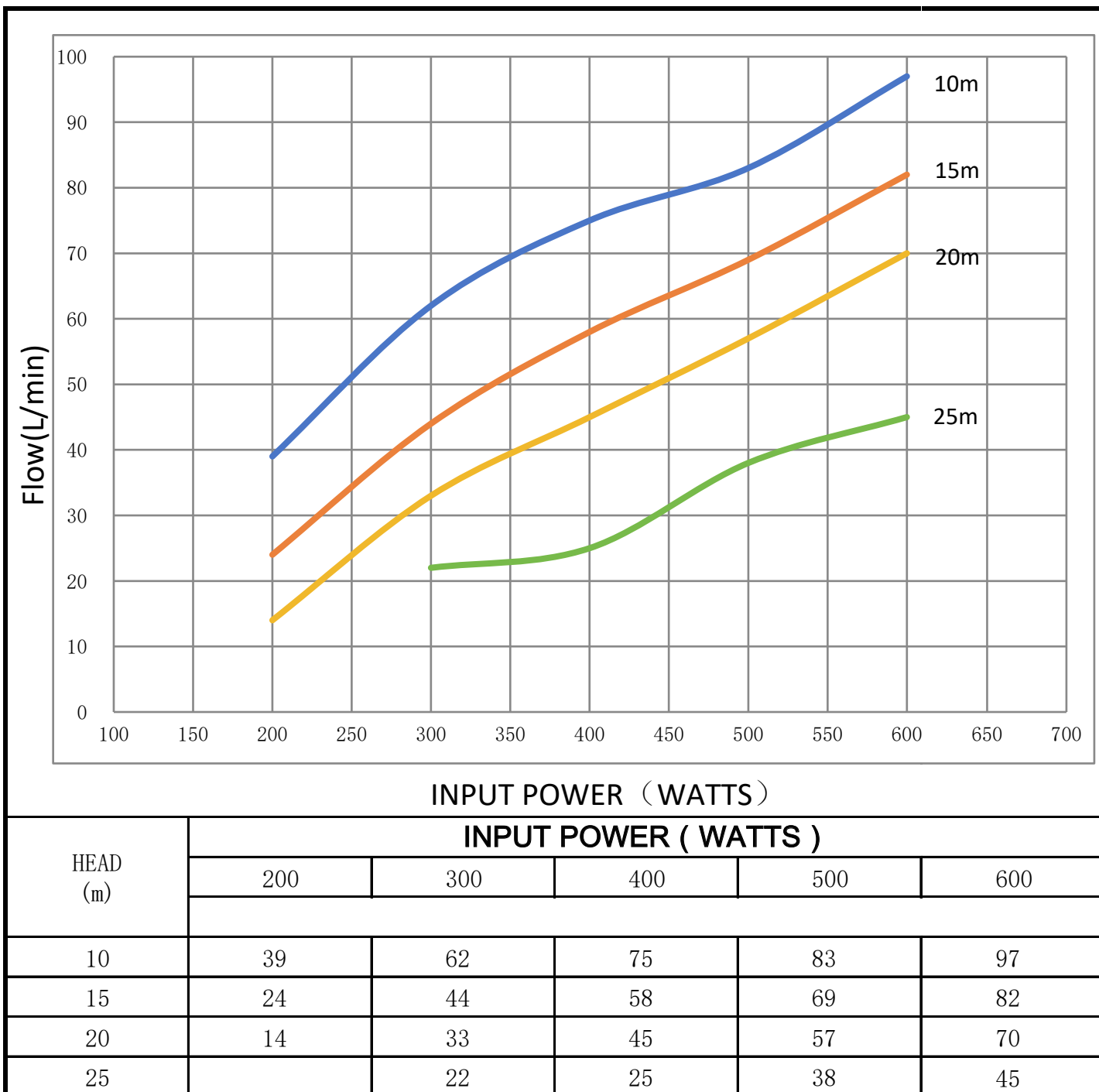
Note:

*AC / DC switching needs to wait 1 minute

*Recommended 3 Pcs of 300W Solar Panel 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.

4SPK3-3 (0.5 AC&DC) Solar Pumping Project Pump Chart



4SPK3-3 (0.5 AC&DC) Solar Pumping Project

Dimensions and Weights

