

Solar pumping System

Nominal Flow	8.0 m ³ /hr @ 50 m
Flow Range	0.5 ~ 16 m ³ /hr
Head Range	2 ~ 90 m

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

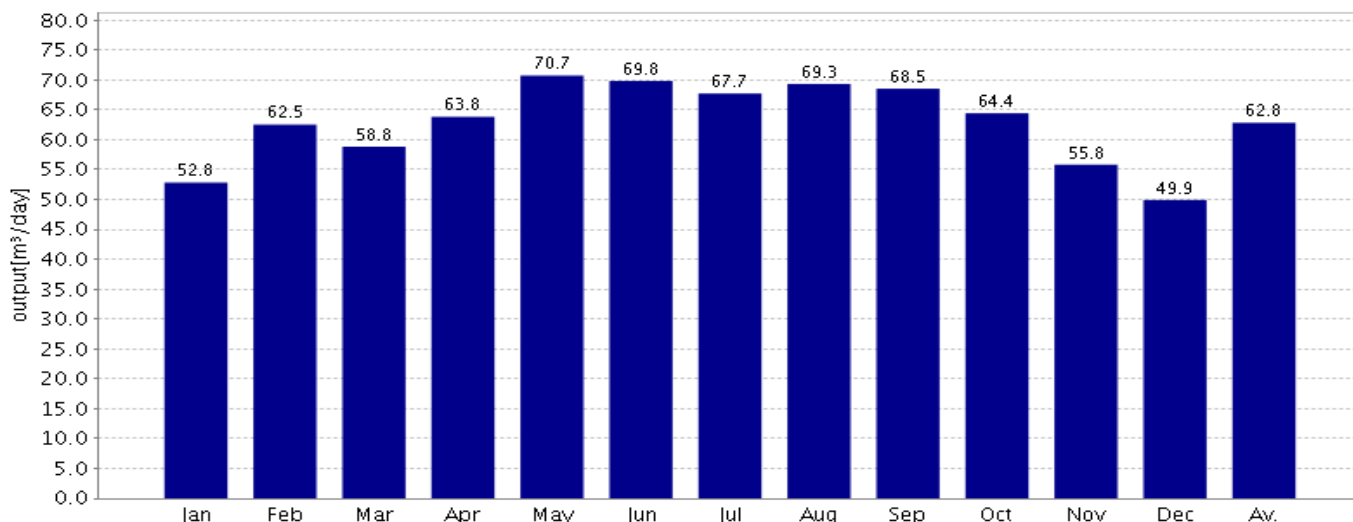
Parameter

Location:	United Arab Emirates;Du	Water Temp:	25°C		
	bai				
Required daily output:	30m ³ /day	Dirt loss:	3%	Motor lenght:	50
Pipe type:	Plastic	Static Head:	50m	Pipe length:	20m

Products

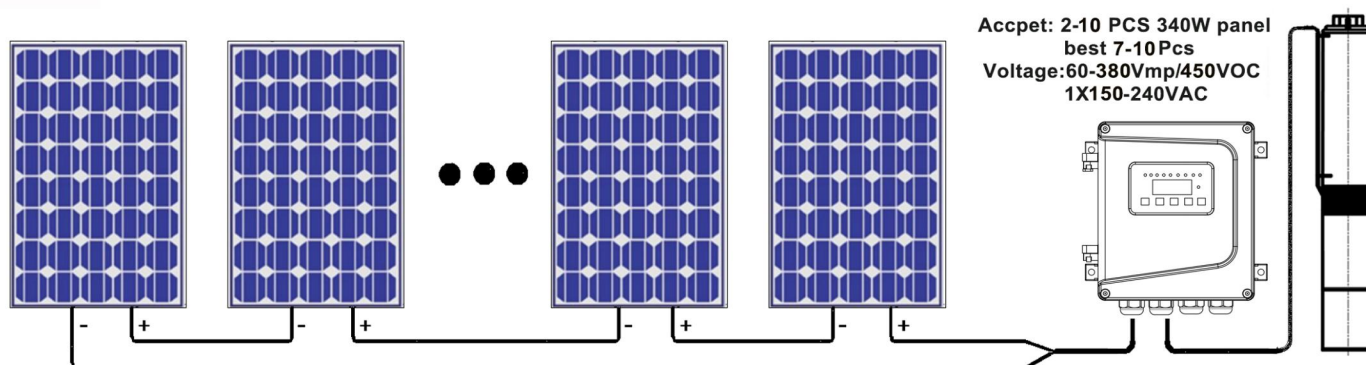
Submersible pump	1pc;4SPW8-9PA(3000W AC&DC)
Solar panel	10pc;3000Wp;300w ×10pcs
Motor cable	
Pipeline	20m;Pipeline
Accessories	

Daily output in average month (62.8) m³/day

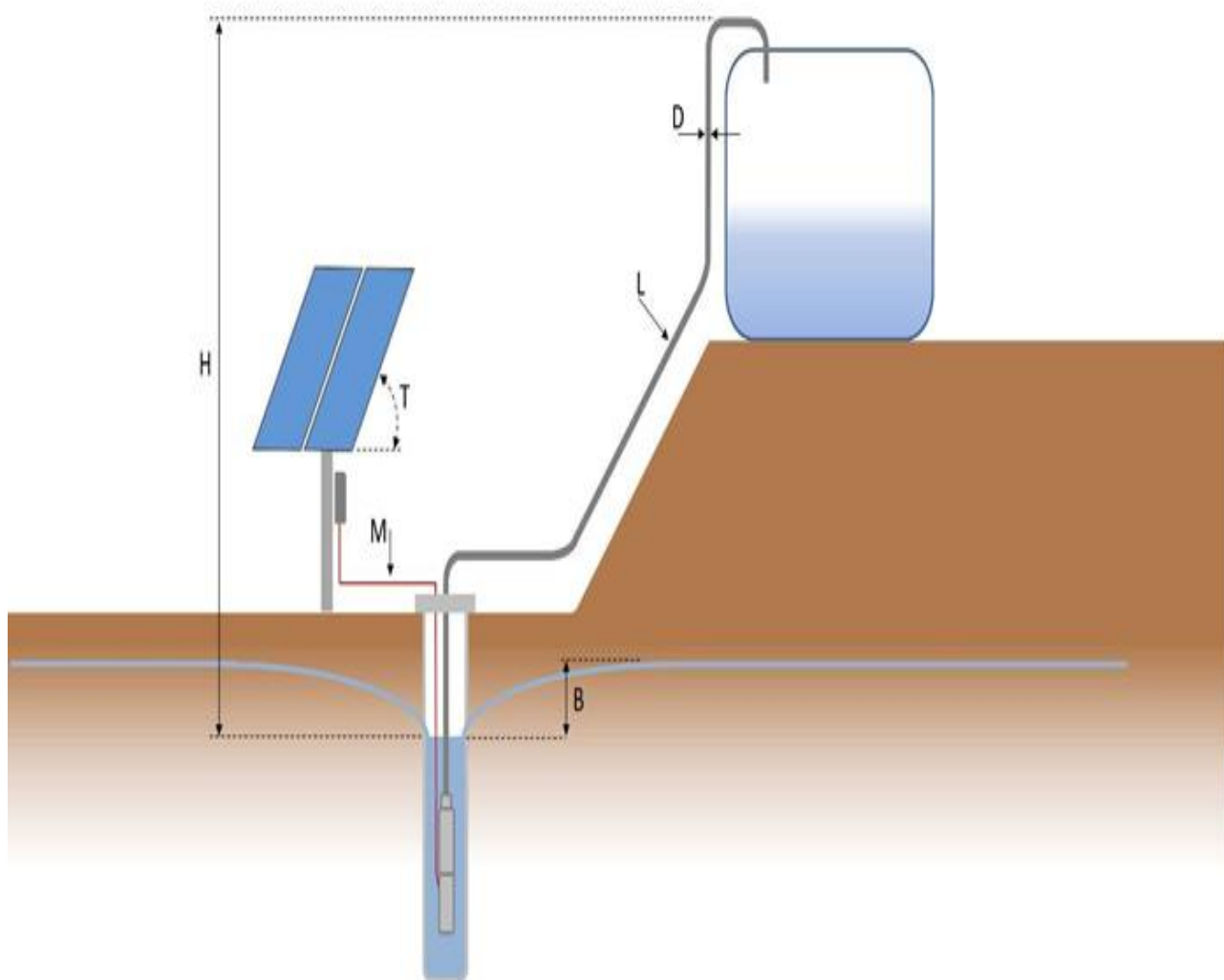


Energy[kWh]	14.80	17.52	16.47	17.87	19.82	19.58	18.98	19.44	19.20	18.06	15.63	13.99	17.60
Irradiation[kWh/m ²]	5.48	6.49	6.10	6.62	7.34	7.25	7.03	7.20	7.11	6.69	5.79	5.18	6.52

Solar Panel Wiring

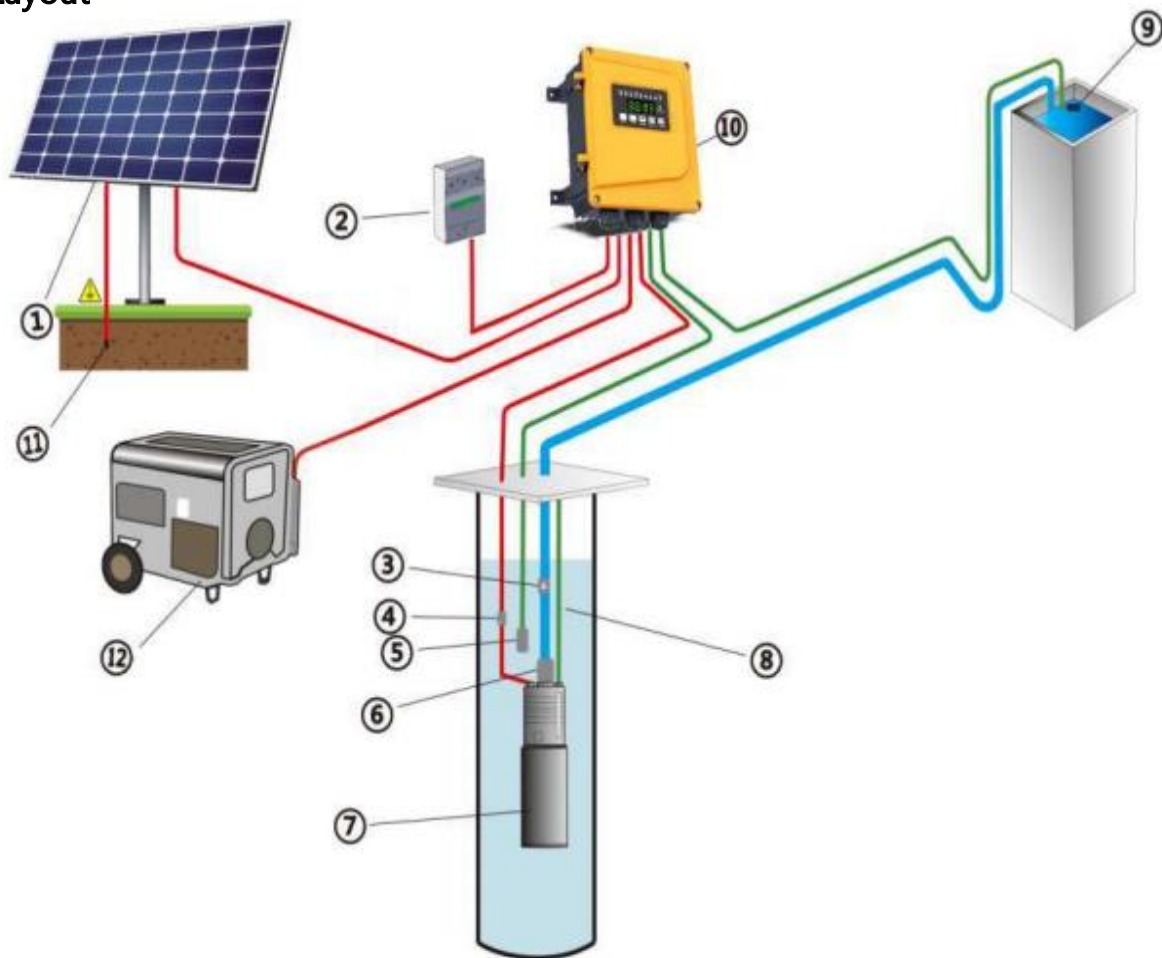


Sizing Layout



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.

System Layout



- 1、Solar Panel Array
- 2、SPD(DC-600V), Surge Protection Device (Optional)
- SPD(AC-275V), Surge Protection Device (Optional)
- 3、Check valve (Optional)
- 4、Wiring waterproof assembly
- 5、The Low-Level Float (For Well ,Optional)
- 6、Sacrificial Anode (Optional)
- 7、Water Pump End and BLDC Motor
- 8、Safety rope
- 9、The High-Level Float (For Tank ,Optional)
- 10、External controller
- 11、Grounding pile (Optional)
- 12、Generator (Single phase 220V)

4SPW8-9PA(3000W AC&DC)

Solar Submersible Pump System

System Overview

Head	max. 102m
Flow	max. 274L/min
Recommend Max input Power	max. 3 kW
Minimum well diameter	min 4 inch
Pump discharge	Rp 2
Efficiency Max	%

Product advantage

- .Stainless steel Motor: AISI 304 (316 optional);
- .BLDC High Efficiency Motor;
- .External Controller;
- .Accpet both AC & DC
- .Voltage/Current/Power/RPM/Display;
- .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:60-380Vmp/450VOC;AC 150-240V 50Hz&60Hz
- .Dry protection(No additional float sensor required);

Technical Data

Controller 4SPW8-8PA(3000W AC&DC)

- .Controller Model 4SPW-A-3000W
- .MPPT Efficiency Max.98%;
- .Voltage:60-380Vmp/450VOC;AC 150-240V 50Hz&60Hz;
- .Enclosure class:IP65;
- .Error report;
- .Losting-Phase protection;
- .Over temperature protection.

Motor 4SPW-A(3000W AC&DC)

Voltage	AC 150-240V DC max.VOC 450V 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

- .Plastic impeller ;stainless steel shell;
- .Non-return valve;
- .Centrifugal pump.

Standards



Note:

- *Accept 2-10 Pcs Solar panels;best 7-10pcs;
- *The Controller is IP65 Rated however it is recommended that it is not mounted in direct sunlight;
- *VOC (V) Volts open circuit nothing connected;Vmp (V) Volts maximum power point under load;Exceeding limits may cause serious harm.



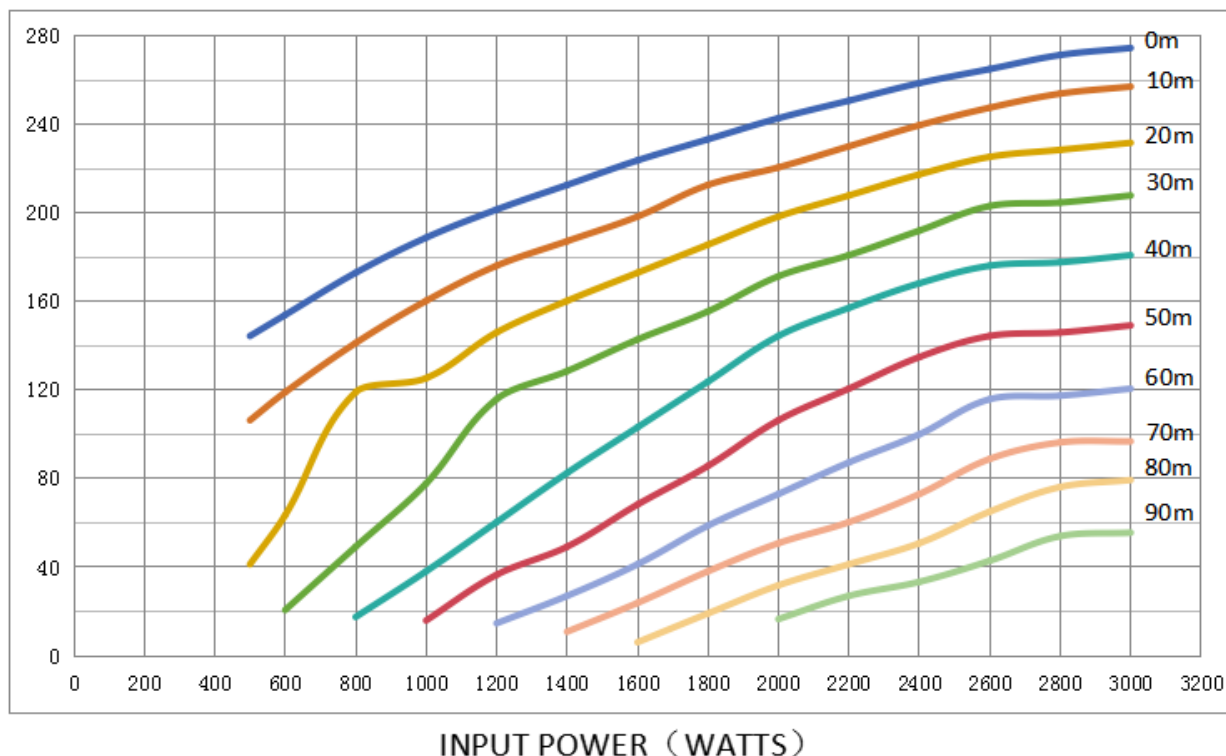
4SPW8-9PA(3000W AC&DC)

Solar Pumping project

Pump chart

4SPW8-9P 3HP

Flow max 274L/min; Head max 102m; BSP 2", Centrifugal pump (Plastic impeller)



HEAD (m)	INPUT POWER (WATTS)													
	500	600	800	1000	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000
	Flow (L/min)													
0	144	154	173	189	201	213	224	233	243	251	259	265	271	274
10	106	119	141	160	176	187	198	213	221	230	240	247	254	257
20	41	63	119	125	146	160	173	186	198	208	217	225	228	232
30		21	49	78	116	129	143	155	171	181	192	203	205	208
40			17	38	60	82	103	124	144	157	168	176	178	181
50				16	36	49	68	86	106	121	135	144	146	149
60					15	27	41	59	73	87	100	116	117	121
70						11	24	38	51	60	73	89	96	97
80							6	19	32	41	51	65	76	79
90									16	27	33	43	54	56

Dimensions and Weights

