

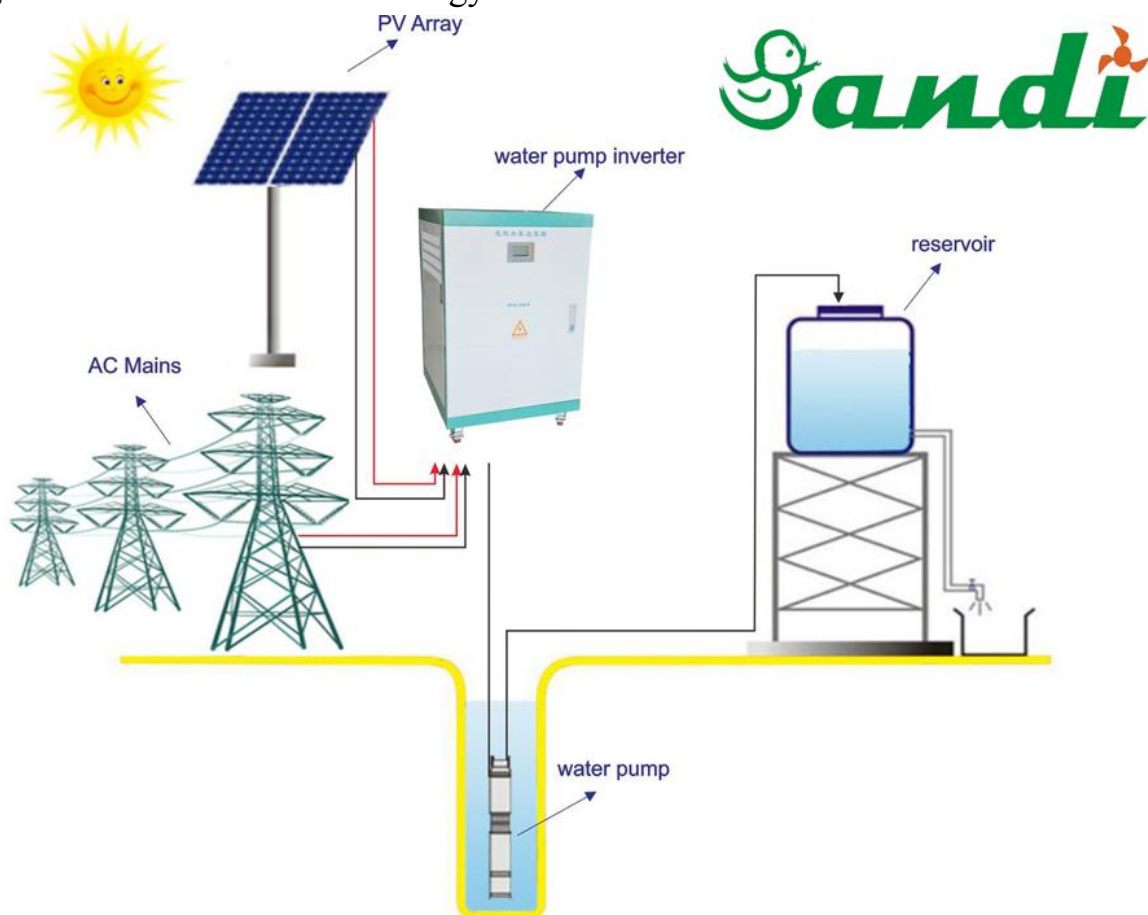
Solar Water Pumping Inverter

SANDI PV pump system is different from traditional AC pump application system, PV pump system is using solar cells to directly convert solar energy into electrical energy, then PV pump inverter drive the AC motor to drive pump getting water from deep well, river, lake etc., finally transport to the destination to meet our demand for water.

PV pumping system consists of four parts: PV array, PV pump inverter, three-phase AC pump and storage device.

PV array absorb sunshine radiation energy and convert it into electrical energy, supply power for whole system.

PV pump inverter is an important part of PV pump inverter system, which convert the output DC from PV array into AC for driving pump, and according to the changes of sunlight intensity in real time to adjust the output voltage and frequency to achieve max. power point tracking and max the use of solar energy.



SOLAR PUMP SYSTEM

Application Scope



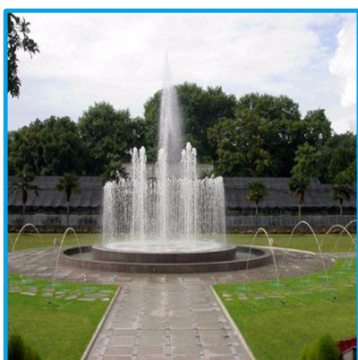
Farm irrigation



Drinking water for livestock



Sewage treatment



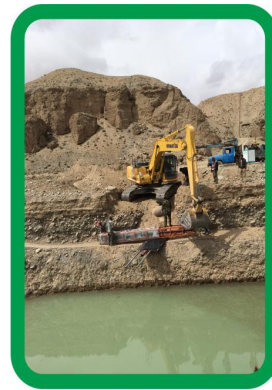
Scenic spot fountain



Drinking water for people



Desert treatment



Product Description:

Solar water pumping system is constructed with solar panel array, solar pump inverter and AC water pump, DC current produced from solar panel will be delivered to solar pump inverter, and it will convert it into AC current to drive water pump, and will automatically regulate output frequency according to sun radiance intensity, maximum realize MPPT tracking function.

■ Product Features

- 1, Adopting the proposed dynamic VI **maximum power point tracking (MPPT)** control method & optimized SVPWM; fast response and stable operation; and the conversion efficiency achieves of **99.9%**.
- 2, Adopting **high-efficiency IPM (intelligent power module)** from Mitsubishi with high reliability and high efficiency 99.9%.
- 3, Designed with **variable frequency driver (VFD)**, can be used in variable frequency speed regulation technology, greatly improves efficiency, and better to protect water pump and maximum utilization of solar panels.
- 4, **LCD display**, can setting various parameters through LCD, easy to operation.
- 5, **Complete protection function** for PV input under voltage, PV input over voltage, input connection Reverse Polarity, DC over current, output, over load, short circuit, dry Well, overflow, dry running, and blocking protection.
- 6, System **modular design**, stable operation, high reliability and safety, installation and **maintenance is very convenient**.
- 7, Can add **AC bypass input**(generator/grid power as backup), can run automatically, without human duty, saving a lot of manpower
- 8, Equipped with RS485 data communication for **remote monitoring** (Optional).
- 9, European CE (EMC, LVD) certificate

Solar pump inverter Specification

Model	Adapted pump motor		Recommend PV input power (KWP)	MPPT Tracking Voltage (V)	Max. DC input voltage (V)	Rated output current(A)	Output frequency (Hz)
	Rated power (kW)	Rated Voltage (Vac)					
SPI-1500W	1.1~1.5	380~440	1.85	450~800	850	2.9	0~50 (60)
SPI-2200W	2.2	380~440	3	450~800	850	4.3	0~50 (60)
SPI-3700W	3~3.7	380~440	4.5	450~800	850	7.2	0~50 (60)
SPI-5500W	4~4.5	380~440	7	450~800	850	10.7	0~50 (60)
SPI-7500W	7.5	380~440	9	450~800	850	14.5	0~50 (60)
SPI-11KW	9.2~11	380~440	13	450~800	850	21.3	0~50 (60)
SPI-15KW	13~15	380~440	18	450~800	850	29	0~50 (60)
SPI-18KW	18.5	380~440	22	450~800	850	34.9	0~50 (60)
SPI-22KW	22	380~440	25	450~800	850	42.7	0~50 (60)
SPI-30KW	26~30	380~440	35	450~800	850	58.2	0~50 (60)
SPI-37KW	37	380~440	45	450~800	850	71.8	0~50 (60)
SPI-45KW	40~45	380~440	53	450~800	850	87.3	0~50 (60)
SPI-55KW	55	380~440	65	450~800	850	106.7	0~50 (60)
SPI-75KW	75	380~440	88	450~800	850	145.5	0~50 (60)
SPI-90KW	90	380~440	105	450~800	850	174.5	0~50 (60)
SPI-110KW	110	380~440	130	450~800	850	213.3	0~50 (60)
SPI-132KW	132	380~440	160	450~800	850	256	0~50 (60)
SPI-150KW	150	380~440	180	450~800	850	290.9	0~50 (60)

Alarm: Please choose the right type of inverter according to PV array and pump motor load.

Other Parameters			
Protection Level	IP65(1.5KW-22KW) IP20(30KW-150KW)	Communication	RS485
Operating Temperature	-25℃~+60℃; above 60℃ need derate operating	Altitude	3000m;above 3000m need derate operating
Cooling Way	Natural Cooling	Noise Emission	<50dB
Display	LCD	Water Sensors	Optional

Product Pictures



Small Type (1.5kw~22kw)



Large Type (25kw~150kW)