

SOLAR IRRIGATION SYSTEM

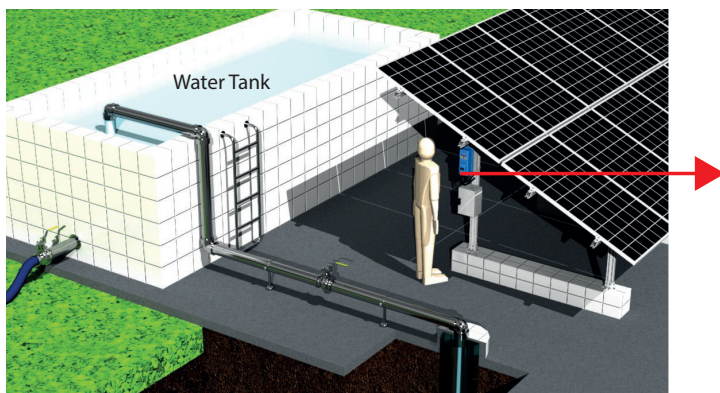
Three phase submersible or surface water pumps can run on energy generated from solar panels directly, where there is no electricity grid or generator.

Solar irrigation system consists of a Solar Direct Drive unit with MPPT feature, solar panels and a water tank where necessary.

Solar panels are connected directly to the SDD unit and the highest instantaneous power generated by panels is transmitted to the pump (MPPT function). Motor drive unit changes the pump shaft speed and torque so that system offers the use of water at high flow rates at noon and low flow rates in the evening depending on the instantaneous power delivered by the solar panels. Water can be used instantaneously or it can be stored in the tank and be used for irrigation at night time.

Equipment to be used in this system and cost are associated with the following data and the technical planning of the system;

- Wide range of power and voltage / Wide power range of 220 V (1 PH), 220 V (3 PH) and 380 V (3 PH) 0.75 kW – 55 kW
- Multiple protection measures / PV Overvoltage protection, over-temperature alarm, PV reverse connection alarm, etc.
- Maximum efficiency with advanced MPPT feature
- Network capability
- Pump protection with the use of a liquid level sensor



Model	SOLAR DRIVE								PV	AC PUMP		Max. Efficiency
	Inverter Power (kW)	Input Voltage DC (V)	Inverter Max. DC voltage (Voc) (V)	MPPT Voltage (V)	Recommended MPPT Voltage (V)	Max. DC Input Current (A)	Output Current (AC) A	Operating Frequency (Hz)	455W Number of Panels	Pump Power (kW)	Operating (VAC)	
SDDPV2200M	2,2	200-440	440	200-400	330	12	14	0-50/60	8	2,2	1 Phase 220	97%
SDDPV2200U	2,2	200-440	440	200-400	330	12	10	0-50/60	8	2,2	3 Phase 220	
SSDDPV2200	2,2	300-800	800	300-750	550	12	5,5	0-50/60	14	2,2	3 Phase 380	
SDDPV4000	4	300-800	800	300-750	550	16,5	9,5	0-50/60	14	3	3 Phase 380	
SDDPV5500	5,5	300-800	800	300-750	550	23,9	14	0-50/60	16	5,5	3 Phase 380	
SDDPV7500	7,5	300-800	800	300-750	550	30,6	18,5	0-50/60	28	7,5	3 Phase 380	
SDDPV11K	11	300-800	800	300-750	550	39,2	25	0-50/60	32	11	3 Phase 380	
SDDPV15K	15	300-800	800	300-750	550	49	32	0-50/60	48	15	3 Phase 380	
SDDPV18K	18,5	300-800	800	300-750	550	50	38	0-50/60	56	18	3 Phase 380	
SDDPV22K	22	300-800	800	300-750	550	60	45	0-50/60	70	22	3 Phase 380	
SDDPV30K	30	300-800	800	300-750	550	81	60	0-50/60	96	30	3 Phase 380	
SDDPV37K	37	300-800	800	300-750	550	90	75	0-50/60	112	37	3 Phase 380	
SDDPV45K	45	300-800	800	300-750	550	130	92	0-50/60	140	45	3 Phase 380	
SDDPV55K	55	300-800	800	300-750	550	150	115	0-50/60	180	55	3 Phase 380	
SDDPV75K	75	300-800	800	300-750	550	200	150	0-50/60	240	75	3 Phase 380	
SDDPV90K	90	300-800	800	300-750	550	250	180	0-50/60	285	90	3 Phase 380	
SDDPV110K	110	300-800	800	300-750	550	300	215	0-50/60	352	110	3 Phase 380	

TECHNICAL SPECIFICATIONS

MODEL	SDDPV700M	SDDPV2200M	SDDPV2200U	SDDPV700	SDDPV2200	SDDPV4000	SDDPV5500
Power (kW)	0,75	2,2	2,2	0,75	2,2	4	5,5
INPUT							
AC input voltage (V)	230 (±15%) (1 PH)		230 (±15%) (3 PH)	400 (±15%) (3 PH)			
Maximum PV open circuit voltage (V)	440			800			
Initial PV voltage (V)	200			300			
MPPT voltage range (V)	200-400			300-750			
Recommended MPPT voltage (V)	330			550			
Max. DC input current (A)	9,3	12	12	3,4	12	16,5	23,9
OUTPUT							
AC output power (kW)	0,75	2,2	2,2	0,75	2,2	4	5,5
Nominal AC voltage (V)	220 (1 PF)		220 (3 PF)	380 (3 PH)			
Nominal AC output current (A)	7,2	14	10	2,5	5,5	9,5	14
Output frequency range (Hz.)	0-400						
PHYSICAL							
Dimension HxWxD (mm)	160x80x123.5	185x80x140.5				256x146x167	
Operating temperature	-10°C / +50°C						
Storage temperature	-40°C / +70°C						

MODEL	SDDPV7500	SDDPV11K	SDDPV15K	SDDPV18K	SDDPV22K	SDDPV30K	SDDPV37K	SDDPV45K	SDDPV55K	SDDPV75K	SDDPV90K	SDDPV110K	
Power (kW)	7,5	11	15	18,5	22	30	37	45	55	75	90	110	
GİRİŞ													
AC input voltage (V)	400 (±15%) (3 PH)												
Maximum PV open circuit voltage (V)	800												
Initial PV voltage (V)	300												
MPPT voltage range (V)	300-750												
Recommended MPPT voltage (V)	550												
Max. DC input current (A)	30,6	39,2	49	50	60	81	90	130	150	200	250	300	
OUTPUT													
AC output power (kW)	7,5	11	15	18,5	22	30	37	45	55	75	90	110	
Nominal AC voltage (V)	380 (3 PH)												
Nominal AC output current (A)	18,5	25	32	38	45	60	75	92	115	150	180	215	
Output frequency range (Hz.)	0-400												
PHYSICAL													
Dimension HxWxD (mm)	320x170x196.3			340.6x200x184.3			400.0x250.0x202.0			560.0x282.0x238.0			554.0x338.0x326.2
Operating temperature	-10°C / +50°C												
Storage temperature	-40°C / +70°C												