



## SOLAR IRRIGATION SYSTEM

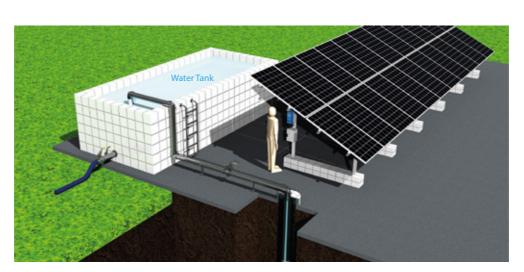
Three phase 5.5kW and higher submersible or surface water pumps can run on energy generated from solar panels directly, where there is no electricity grid or generator.

Solar irrigation system consists of a Tescom SDD55 (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 thsystem and coast are associated with the following data and the technical planning of the system;

- Well depth / meter (only for submersible pumps)
- The requested amount of daily water / ton
- Irragiation season (beginning and ending months)
- Installation location (village, town and city name)



|                  | Solar Pump Inverter    |                            |                        |                             |                            | PV                        | AC PUMP                 |                            |
|------------------|------------------------|----------------------------|------------------------|-----------------------------|----------------------------|---------------------------|-------------------------|----------------------------|
| MODEL            | Rated<br>Power<br>(KW) | Input Voltage<br>DC<br>(V) | MPPT<br>Voltage<br>(V) | Output<br>Current (AC)<br>A | Frequency<br>Power<br>(Hz) | DC<br>Rated Power<br>(kW) | Pump<br>Voltage<br>(KW) | Output<br>Voltage<br>(VAC) |
| SDD55 / SDDV2200 | 2,2                    | 550-850                    | 350-750                | 10,8                        | 0-50/60                    | 3,2                       | 1,5                     | 3 Phase 380                |
| SDD55 / SDDV2200 | 2,2                    | 550-850                    | 350-750                | 10,8                        | 0-50/60                    | 3,2                       | 2,2                     | 3 Phase 380                |
| SDD55 / SDDV4000 | 4                      | 550-850                    | 350-750                | 10,8                        | 0-50/60                    | 4,5                       | 3                       | 3 Phase 380                |
| SDD55 / SDDV4000 | 4                      | 550-850                    | 350-750                | 10,8                        | 0-50/60                    | 6,4                       | 4                       | 3 Phase 380                |
| SDD55 SDDV55000  | 5,5                    | 550-850                    | 350-750                | 10,8                        | 0-50/60                    | 8                         | 5,5                     | 3 Phase 380                |
| SDDV7500         | 7,5                    | 500-800                    | 500-800                | 18,5                        | 0-50/60                    | 11,25                     | 7,5                     | 3 Phase 380                |
| SDDV11K          | 11                     | 500-800                    | 500-800                | 25                          | 0-50/60                    | 16,5                      | 11                      | 3 Phase 380                |
| SDDV15K          | 15                     | 500-800                    | 500-800                | 32                          | 0-50/60                    | 22,5                      | 15                      | 3 Phase 380                |