TDS Hybrid

Solar hybrid inverter for power pumps

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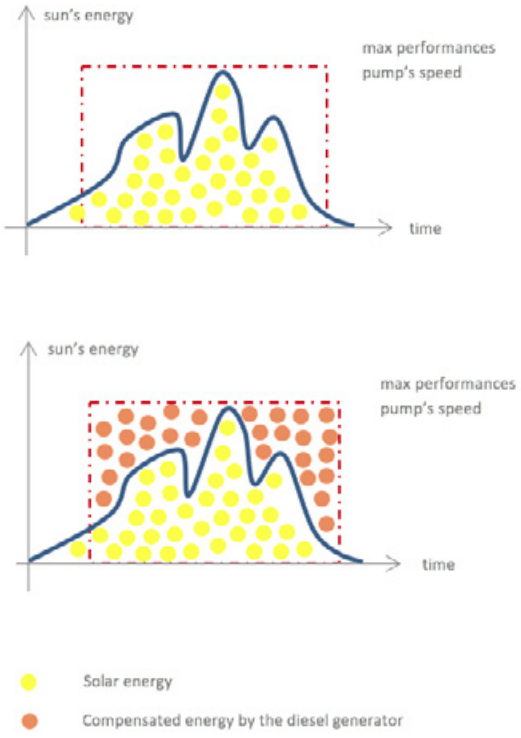
TDS Hybrid is the perfect solution for h24 solar – hybrid systems



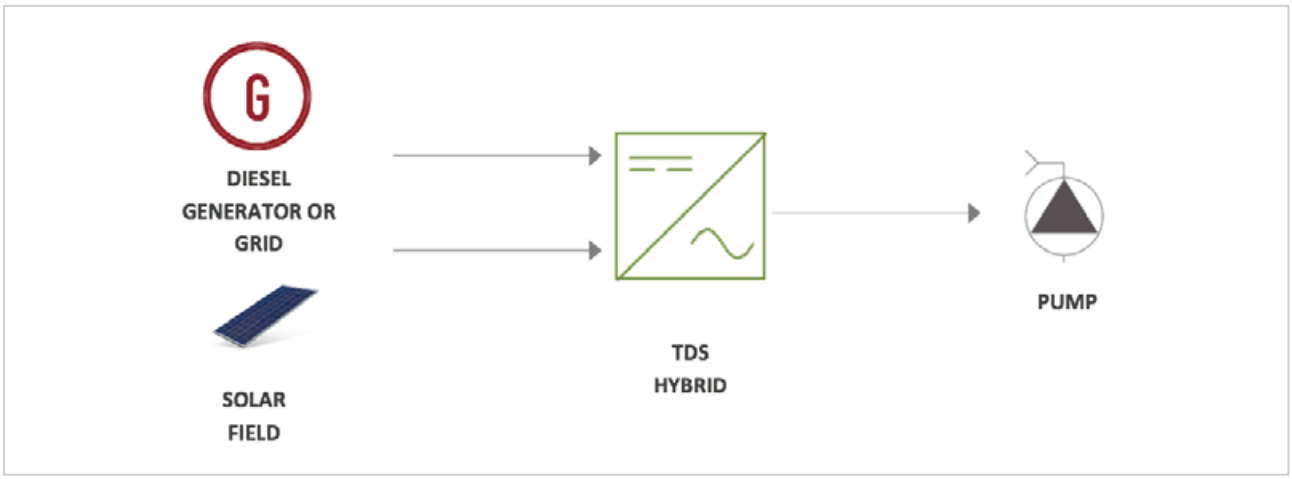
TDS Hybrid is a pumping water system powered from photovoltaic panels or with hybrid power (photovoltaic and power grid at the same time).

You can feed the system as hybrid, that is, from the power grid and photovoltaic simultaneously, integrating momentary power shortages on photovoltaics for weather reasons or during the night.

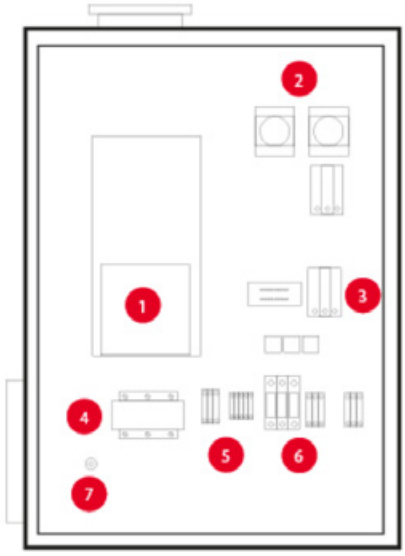
In this mode, the system can not in any way enter power into the grid.

All the advantages of the melting of the energy sources

The following picture shows the main and the base scheme of the application. The system can use both grid connection (three-phase alternating current) and photovoltaic power (direct current), or both together. By setting photovoltaic power, the system automatically and proportionally uses photovoltaic energy available, offsetting the remained energy with that coming from the grid (or a generator). In the version only with photovoltaic drive, once reached the minimum of available energy, the pump will stop working turning off, and it automatically reactivated at sunrise.



One single e-Box all in one



Item	Description
1	Power unit, inverter
2	Power switch
3	Overvoltage protection on the photovoltaic generator
4	Motor output connection, directly on the DV/DT or sinusoidal filter (optional)
5	Terminal block for power grid input and signals.
6	Input strings connection from the photovoltaic generator
7	Security lock

Inverter technical data

- Electrical panel with protection IP54
- Power supply 4T version: 500-820Vdc photovoltaic - 400Vac 3PH 50/60Hz mains
- Motor output 4T version: 400Vac 3PH
- MPPT software control
- "Dry Pump" function
- Input for pyranometer to switching on diesel generator
- Automatic or manual mode
- Filter DV / DT or sinusoidal for motor protection
- String inputs with protection against electric shock and overcurrent
- Power switch DC
- AC power supply input with switch and fuse protection
- Working ambient temperature maximum: 40 ° C
- Suitable with main cabinet with IP protection 41/55/65/67 on request

TDS Hybrid: ready for all power water pumping systems

Code	Vin DC (Vdc)	Vin AC (Vac)	Nominal output current (A)	Motor voltage (ph – voltage)	Estimated typical motor's P2 (hp)***	Includes
TDS Hybrid 10.5	320-820	380-420	10.5	3 x 400	5.5	Power unit, inverter Power switch Overvoltage protection on the photovoltaic generator Motor output connection, directly on the DV/DT or sinusoidal filter (optional) Terminal block for power grid input and signals. Input strings connection from the photovoltaic generator Security lock
TDS Hybrid 12.5	320-820	380-420	12.5	3 x 400	6.3	
TDS Hybrid 16.5	320-820	380-420	16.5	3 x 400	8	
TDS Hybrid 27	320-820	380-420	27	3 x 400	15	
TDS Hybrid 41	320-820	380-420	41	3 x 400	24	
TDS Hybrid 57	320-820	380-420	57	3 x 400	33	
TDS Hybrid 60	320-820	380-420	60	3 x 400	35.5	
TDS Hybrid 80	320-820	380-420	80	3 x 400	47.5	
TDS Hybrid 88	320-820	380-420	88	3 x 400	59.5	
TDS Hybrid 103	320-820	380-420	103	3 x 400	61	
TDS Hybrid 120	320-820	380-420	120	3 x 400	74	
TDS Hybrid 135	320-820	380-420	135	3 x 400	82	
TDS Hybrid 180	320-820	380-420	180	3 x 400	107	
TDS Hybrid 195	320-820	380-420	195	3 x 400	120.5	
TDS Hybrid 215	320-820	380-420	215	3 x 400	133	
TDS Hybrid 300	320-820	380-420	300	3 x 400	200	
TDS Hybrid 425	320-820	380-420	425	3 x 400	270	

*** Typical motor power. It is recommended to refer to the rated motor current when selecting the TDS Hybrid inverter.

Perfect for irrigation systems that need constant pressure

The irrigation system is connected to a solar plant and to a diesel generator.

The purpose of the generator is to fill in any moment the energy gap given from the difference between the power needed by the pump to work in its maximum performance point and the power available from the sun, in particular during the night operations.

In this way, the use of the solar energy is maximized and the motor works at the right frequency to constantly supply the irrigation system.

Case history: solar pivot in Sudan

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