DACC GLOBAL

OFF-GRID SOLAR WATER SYSTEM

DACC Global's state-of-the-art, off-grid solar-powered water pumping, purification and storage system utilizes industry-leading technology and is designed to provide a reliable water pumping and storage mechanism that is autonomous to the electrical grid. It comes complete with all necessary equipment for easy transport and quick assembly, allowing for installation virtually anywhere there is access to an underground aquifer. With minimal maintenance, each system is capable of providing a continuous source of water for 10 years or more. Multiple tank options allow for storage capacity ranging from 5,000 gallons (19,000 liters) to over 250,000 gallons (950,000 liters) giving you the ability to tailor the system to your specific applications.

KEY FEATURES

- Pumps 8,500 gallons (32,000 liters) of fresh water per day
  - Over 3 million gallons (11 million liters) of fresh water per year
- Completely independent of the electrical grid and gasoline generators
  - 100% solar-generated power
  - No batteries required
- Built to last
  - Designed to withstand winds up to 150 mph (240 kmph)
- Easy to assemble
  - Modular panels are easy to set up
  - Solar pump is 100% preassembled
  - Water container sets up within hours
- Easy to ship
  - Entire system fits in a single 20' container
- Designed, manufactured and assembled in the USA

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SOLAR PANELS

12 – 180W Solar Panels producing 2,160 Peak Watts

- Efficient
  - Solar panels with up to 18% efficiency
  - Higher output than any existing solution
  - Generates more power using less space
- Built to last
  - Tempered Glass and EVA Laminated Solar Cells
    - Provides protection against the elements
      - Water/Rain
      - Dust/Rocks
      - Cracking/Chips/Scratches
      - Normal wear and tear
  - Impact resistant
  - Provides over 80% output at 20 years
- Economics
  - Eliminates requirements for electricity from the grid
    - Not affected by fluctuations in energy prices
  - Eliminates trenching expense for power line connectivity

WATER TANKS

The high quality and versatility of the tanks make them the ideal choice for many applications, including domestic, agricultural and water storage purposes, while providing a safe and reliable storage facility.

- Safety & Security
  - Debris collector
  - Lockable access hatch
  - Removable internal-external ladder
- Built to last
  - 5 layers to protect against the elements
    - Black and green polyethylene coating
    - High tenacity multifilament polypropylene
    - Clear polyethylene film
    - Protective seal
    - Sacrificial anodes for corrosion protection
  - Fire Resistant
  - Low-profile design
    - Withstands winds up to 150 mph (240 kmph)

WATER PUMP

With the pump being one of the most critical components of an off-grid solar water system, it is built to stringent standards to meet the guidelines DACC Global has set forth to assure reliability and ease of use.

- Built to last
  - Run dry protection
    - Automatically turns off when water levels fall below a safe threshold
  - Overheat protection
    - Automatically shuts off if temp. exceeds 185° F (85° C)
  - Undervoltage and overvoltage protection
    - In the event of electrical anomalies
  - Overload protection
    - If power input is exceeded
    - If pump becomes blocked
- Efficient
  - Permanent magnetic motor
    - Best suited for the power levels generated by solar panels
  - High locked-rotor torque at low power use
  - Operates at a wide voltage range
    - 30 – 300 V/DC
    - 90 – 240 V/AC

Helical Rotor Pump

Based on reliable and proven pumping principles, the helical rotor pump uses a few, simple components for effective pumping.

Pump Casing

Stainless steel for long pump life.

Bearing

Powerful carbon/ceramic bearing systems ensure extreme reliability.

Motor

Single motor for the entire pump range with unique, built-in features, such as a newly developed, segmented stator for high efficiency.

Power Transmission

A specially designed micro-frequency converter ensures power transmission to the motor.

System Efficiency

Maximum Power Point Tracking (MPPT) reliably delivers a high performance system regardless of power source.

Two-way Communication

Two-way communication between the interface box and pump eliminates the need for additional wires.

Wide Voltage Range

A wide voltage range enables the motor to operate at any voltage between 30 - 300 V/DC or 90 - 240 V/AC, which makes installation and sizing especially easy.