

ETAPUMP® AC POWER PACK

AC-DC converter to power *ETAPUMP* or *SunCentric P* solar pump from a generator or utility power



For emergency backup, supplemental, or temporary power

High conversion efficiency

Sealed outdoor housing

VERSION 1.3 September 2003

THE PROBLEM

Some solar pumps may not provide sufficient flow during all conditions, especially in unusually cloudy weather or if sufficient storage is not provided.

THE SOLUTION

The *ETAPUMP AC Power Pack* allows the pump to be powered by an AC generator or commercial utility power. When the *Power Pack* or its AC supply is turned off, the solar array again supplies the power. The transfer is automatic.

A common application is for a portable genset (gasoline generator) to run an *ETAPUMP* well pump. When the generator is stopped (or runs out of fuel) the pump returns to solar power.

Another application is for the *SunCentric P* solar swimming pool pump, for supplemental power or to assure peak performance on cleaning day.

The *AC Power Pack* will power the pump to its full potential flow rate, as indicated on the *ETAPUMP* or *SunCentric P* Performance Table for 600 watt systems. In a lower power system, *AC Power Pack* will produce a greater flow rate than solar power.

SPECIFICATIONS

- AC Input: 115 or 230V (selectable), 47 to 63Hz
- AC Input current: 6.4A (115V) or 3.2A (230V)
- PV Input Voltage: 48V DC nominal
- DC Output: maximum 76V, 8.5A
- Overload protection: Internal fuse, 10A
- Enclosure: Steel, gasket-sealed, outdoor-rated, hinged front cover with removable closure knob.

ITEM # 11930

Dankoff Solar Products, Inc.
Santa Fe, NM USA
solar power & pumping
since 1983



DIMENSIONS

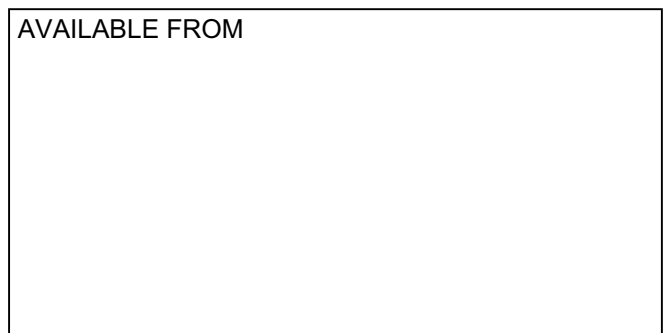
15.7" X 11.8" X 5.5" (400 X 300 X 140mm)

WEIGHT 35 lbs. (16 kg)

WARRANTY

Two years for use with *ETAPUMP* or *SunCentric P*.

AVAILABLE FROM



INSTRUCTIONS: INSTALLING THE *ETAPUMP AC POWER PACK*

WARNING This device is to be installed, connected and serviced by qualified personnel only. Ensure all power sources are disconnected when making connections to this unit. Follow all appropriate electrical codes. There are no user-serviceable parts inside.

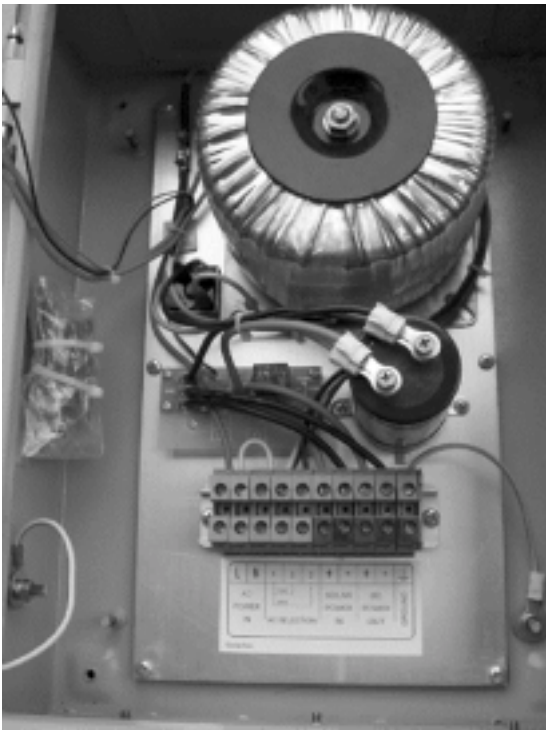
WARNING Power Pack must be protected from solar heat, especially direct mid-day sun. Mount it in the shade. If there is not a shady location, make a shade from sheet metal. Allow free air circulation around the cooling fins on the back of the enclosure. For wall mounting, use spacers to stand it out so the cooling fins do not touch the wall.

WARNING Power Pack must be OFF while it is being wired to the solar pump controller, or controller damage may result. Never connect it while it is "hot".

WARNING When using this device with *SunCentric P* (all models), or *ETAPUMP* model ETA-75C or 107C, the "maximum RPM" control in the pump controller must be on "position 2". This is illustrated in the pump instruction manual under "Maximum RPM Control".

MOUNTING Mount the AC Power Pack close to the *ETAPUMP* pump controller, in a vertical position. You will find four mounting brackets in a plastic bag inside the enclosure. **WIRING SIZES** All wires must be #14 AWG or larger.

INPUT VOLTAGE SELECTION Selection must be made by connecting a wire from terminal 1 to either 2 or 3, as indicated on the terminal label. For 115V, connect 1-2. For 230V, connect 1-3.



GROUNDING Bond the metal enclosure to the ground connections of the AC power source and the solar power system. See your pump's instruction manual.

AC POWER SOURCE Install a 15 amp circuit breaker at the power source or distribution box.

AC INPUT Connect AC power to terminals L and N. (For a 230V connection, N does NOT indicate neutral.)

SOLAR POWER IN Connect the + and – wires from the solar array disconnect switch to the SOLAR POWER IN terminals. If the solar pump was previously installed without this device, the wires will need to be removed from the POWER IN terminals of the solar pump controller or from the disconnect switch, and diverted to the Power Pack.

DC POWER OUT Connect two wires from the DC POWER OUT + and – terminals to the POWER IN + and – terminals in the solar pump controller.

INTERNAL FUSE There is a 10 amp fuse in the upper left. This fuse should blow only if there is an electrical fault in the Power Pack, or the pump controller, or the wiring between them. It will NOT blow if the pump is short-circuited or overloaded. (In that case, the pump controller will stop the pump.)

Spare fuses are included in the parts bag. Additional fuses are available from electronic suppliers (5 X 20mm, 10 amp, time-delay). If the fuse continues to blow, the fault must be found and repaired. Substitution of a higher-rated fuse or bypassing the fuse will void the warranties of both the AC Power Pack AND the *ETAPUMP* pump controller.

OPERATING THE AC POWER PACK

Connect the AC power source and turn on the Power Pack AFTER it has been connected to the *ETAPUMP* controller. When the controller and the Power Pack are turned on, the System ON light should show on the controller, and the pump should start. When the Power Pack is turned off (or its AC source disconnected), the solar array will remain connected. When the pump is running on solar and the Power Pack is switched on or off, the sudden transition may "surprise" the pump controller and cause the pump to stop. This is not a fault. It will restart automatically in about a minute.

If the AC power source is from the utility line (not a generator), it is best to turn off the Power Pack or its AC supply when it is not needed. Otherwise, the Power Pack will draw a small amount of power all the time. Switching can be done automatically using a timer switch on the AC line. Timer switches of many kinds are available from suppliers of electrical, swimming pool and irrigation equipment.