

## SOLAR PANEL



*Non contractual photo*

**SERVICE :**

**DIMENSIONS : 1570 X 1100 X 2020/1300**

**WEIGHT : 150 KG**

### REFERENCE : TOURNESOL

The world is confronted with the enormous problem of energy production and the recurring questions on the subject lead us to the search for new renewable sources of substitution and less polluting for the environment. Wind, sun, tides or biomass are emerging ways of responding to these fears of the future. SUNFLOWER is a teaching material for the energy exploitation of the sun. The recovered energy must be exploitable and stored. Photovoltaic panels allow this transformation. SUNFLOWER transforms solar energy into electrical energy and stores it in batteries.

Deltalab offers modules "users" of this energy in the fields : Water Treatment (reverse osmosis, MP20 or MP21); Hydrotechnics (SPH400 pumping station, MP73); of Electrical Engineering.

#### Technical specifications :

Analysis and study of industrial components (solar panels, batteries, regulator, converter). Optimization and influence of the various parameters. (Orientation of the panels, surface temperature of the panels, luminosity, hour of exploitation, etc .....). Study of yields. : (Efficiency between the known source of solar energy and the recovered energy) Consumption Ratio for a known charge, BATTERIES / AREA.

#### Power :

- 2 photovoltaic Mono crystalline solar panels of 130 W each; 12 V.
- Dimensions : 1482 x 676 x 35 mm.
- These two panels are connected in series and thus provide a power of 260 W at 24 V.
- 1 12 / 24V 20A regulator with twilight detection.
- 4 batteries; 12V 80Ah.
- 1 converter 24 / 230V; 3300W.

#### Control and Security :

- 1 ANL fuse holder with 160 A fuse
- 1 unipolar battery cutter. 150A continuous.
- 2 panel controllers and digital batteries.
- 1 electrical box including : EDF network supply; Battery power supply; Departure charge; An automatic network switch or battery to charge depending on the minimum battery charge; Two 230V MONO energy indicators,
- indicating the energy consumed on the batteries or on the EDF network.

The components are mounted on a rugged welded chassis with four wheels. The position of the photovoltaic panels is adjustable. A protractor allows to visualize the inclination of the panels. A work console receives panel and battery control components. It is protected by a transparent cover for outdoor operation.

#### **OPTIONS :**

Reverse osmosis pilot (MP20 - MP21) Pump Station Units (SPH400 - MP73)