

BOX UNIT FOR EXTRACTION AND PUMPING OF WATER



The autonomy is the strongest point of a system that uses only the SOLAR ENERGY to extract water from the deep underground, which is free from structural constraints of the territory and with zero impact on the environment.

Water is the most valuable asset for the territory and people who live there, it is a prime source of livelihood and development that is not always readily available.

As reply to this need, the pumping systems for water of the company **Solgreen** are designed, systems that use only photovoltaic energy, and the Sun as primary source of energy to extract water from underground and provide it where it is needed.

These boxes are completely reliable and work in autonomy, designed, prepared and carefully tested in our factory before being assigned to the customers.

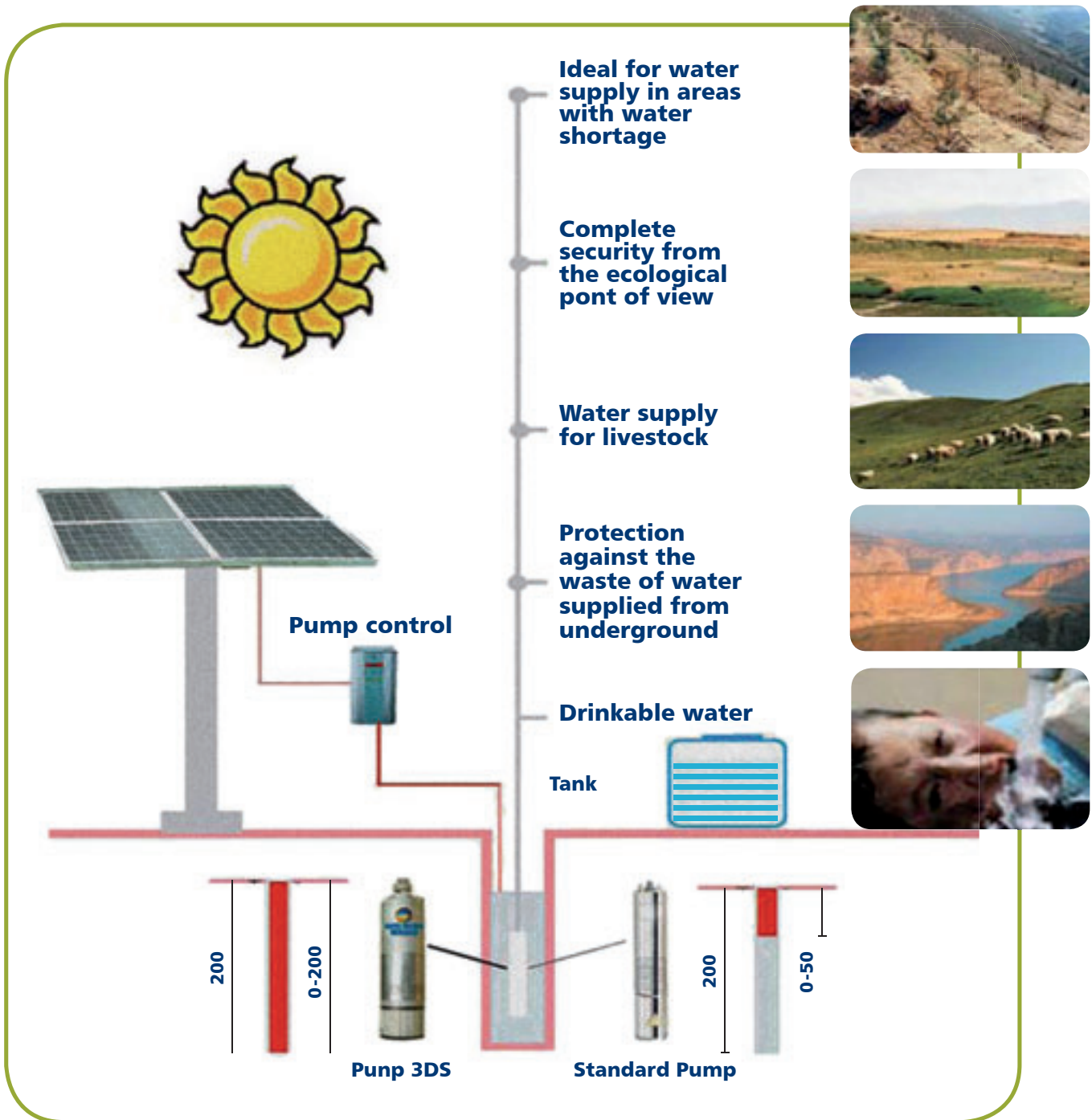
When there is need to extract water from underground, Solgreen boxes are ideal for extracting water independently in any territory.

Type of installation

- A core sampling drill is carried out into the ground with an average depth of 30-40 meters, to identify and acquire drinkable water springs.
- When the drilling is made, a PVC pipe is placed into the hole as to preserve the clean water from contamination and to prevent any obstruction of the duct caused by soil or stones.
- A submersible professional high-flow stainless steel pump is then inserted, which provides an average flow of about 5 cubic meters / hour. The water extracted is pumped into a tank of 1-2 meters / cubic, which is located inside the box, and it is used as a reservoir to make the water available all the time.
- The box is installed on a concrete platform for better stability and protection.
- A series of photovoltaic panels in mono / polycrystalline high-energy yield installed on the roof of the box, produce an optimal power of about 1.5 kW, which can be increased on request according to the requirements of customer and end users.
- The whole 'operation is monitored by an electronic system that manages the various phases of the solar irradiation and the optimization of the electric energy produced.
- Before the utilization, the water goes through a battery of filters which removes impurities.
- Inside the box, it is possible the installation of a small refrigerator powered with electricity generated by the photovoltaic panels. This option is often useful for storing and preserving medicines in outpatient clinics and field hospitals situated in remote areas where the electric supply is very difficult if not altogether nonexistent.
- All the components supporting the photovoltaic panels are made in aluminum, mounting hardware and pipes are galvanized and panels of the box are insulated.
- The staff of **Solgreen** can customize the system for pumping water to match the needs of the customer and the type of the territory where it should be installed.



Photovoltaic Pumps



Solgreen Srl