

WPS SOLAR®

Solar Water Pumping Systems

A solution for every need!



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WPS SOLAR®

Submersible pumps

The solution for groundwater wells

Well Pumps has developed a full range of submersible pumps dedicated to solar pumping systems.



WPS SOLAR®

Drainage pumps

Solar system for drainage and sewage

They are designed for submerged operations, for temporary or permanent installations.



WPS SOLAR Control Box

The WPS Solar controller uses advanced software with Well Pumps algorithm and matching electronic



WPSolarSelect Software

Well Pumps has developed its own software sizing selection program, for WPS Solar solutions.



WPS SOLAR®

Pool pumps

Solar system for swimming pools

The effective solution, without energy consumption costs ensuring the recirculation of water during daytime, which is the period of higher solar incidence.



WPS SOLAR®

Surface pumps

High reliability

The Well Pumps solar surface pumps are designed for photovoltaic energy supply.



Our well Pumps develops and manufactures a wide range of pumps to collect and supply water, which allows to select the most fitting solution to your project. We invest in efficient solutions using renewable energy and we are committed to develop technologies, for a more sustainable future.

R



The solution for groundwater wells

WPS Solar has developed a full range of WPS solar control boxes, specifically dedicated to solar pumping systems.

These controllers can work with all our stainless steel pumps range, from 3" up to 10". They cover motor powers up to 110kW

This can be achieved simply by using only the solar energy.

The coupling of the pump to the engine complies with NEMA standard.

An innovative product that enables the construction of critical systems, also using a generator or electric grid.

WPS Solar Control box

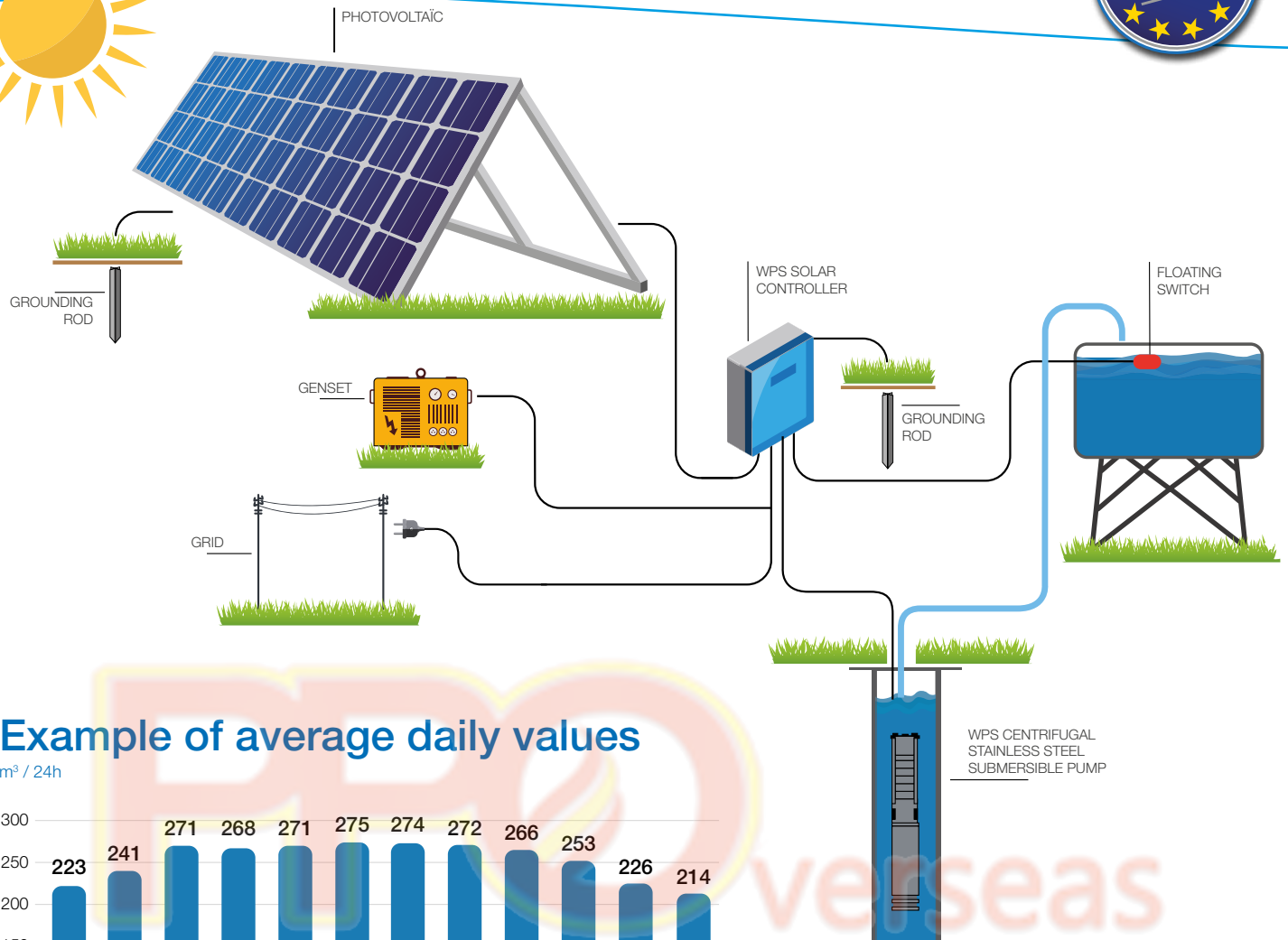
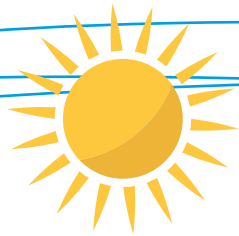
The WPS Solar controller uses advanced software with Well Pumps algorithm and matching electronic.

Includes MPPT, variable speed and dry running detection without the use of sensors. Well Pumps provides a robust, reliable and optimized solution.

WPSolarSelect Software

Our well Pumps developed its own software sizing selection program, for WPS Solar solutions.

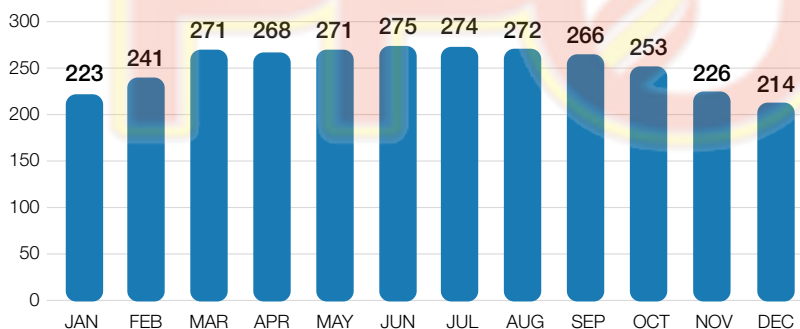




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Example of average daily values

m³ / 24h



WPS Solar[®] Advantages

- **Low operating costs** – the system requires no fuel or electrical grid supply.
- **Strong** – designed for a long-life service in outdoor installations.
- **Versatile** – modular system, adaptable to work with a broad range of submersible pumps.
- **Quick and easy** – suitable to install almost anywhere, also using existing infrastructures.
- **Short-term investment** – with low operating costs, the payback is, in general, unexpectedly fast.
- **Optimized** – with MPP Tracking system, which allows the maximization of the pump performance.
- **Intelligent** – latest generation of the WPS Solar selection software.

Features

Maximum Flow	280m ³ /h
Head	up to 600 meters
Rated Voltage	3~230 V; 3~400 V; 50 Hz
Rotation Speed	2.850 rpm
Connection	up to Rp 6"
Curve Tolerance	ISO 9906
Outer Diameter	from 3" to 10"
Power	Up to 110kW
Enclosure Class	IP68
Insulation	Class F

High efficiency for 3" boreholes

The WPS Solar product range also contains packs. The WPS Solar packs include the pump, the motor and a Solar control box specifically designed for low powered motors.

There are actually 4 different packs WPS Solar 3" PMM. Each one of them works with one motor power (300 W, 600 W, 900 W or 1500 W), covering all the pumps using this range. What is so different? They have been specifically designed to work with our 3" WPS 280Hz Permanent Magnet AC motors! Thanks to that, they can work with less solar panels (between 2 and 8!). They also have the following advantages:

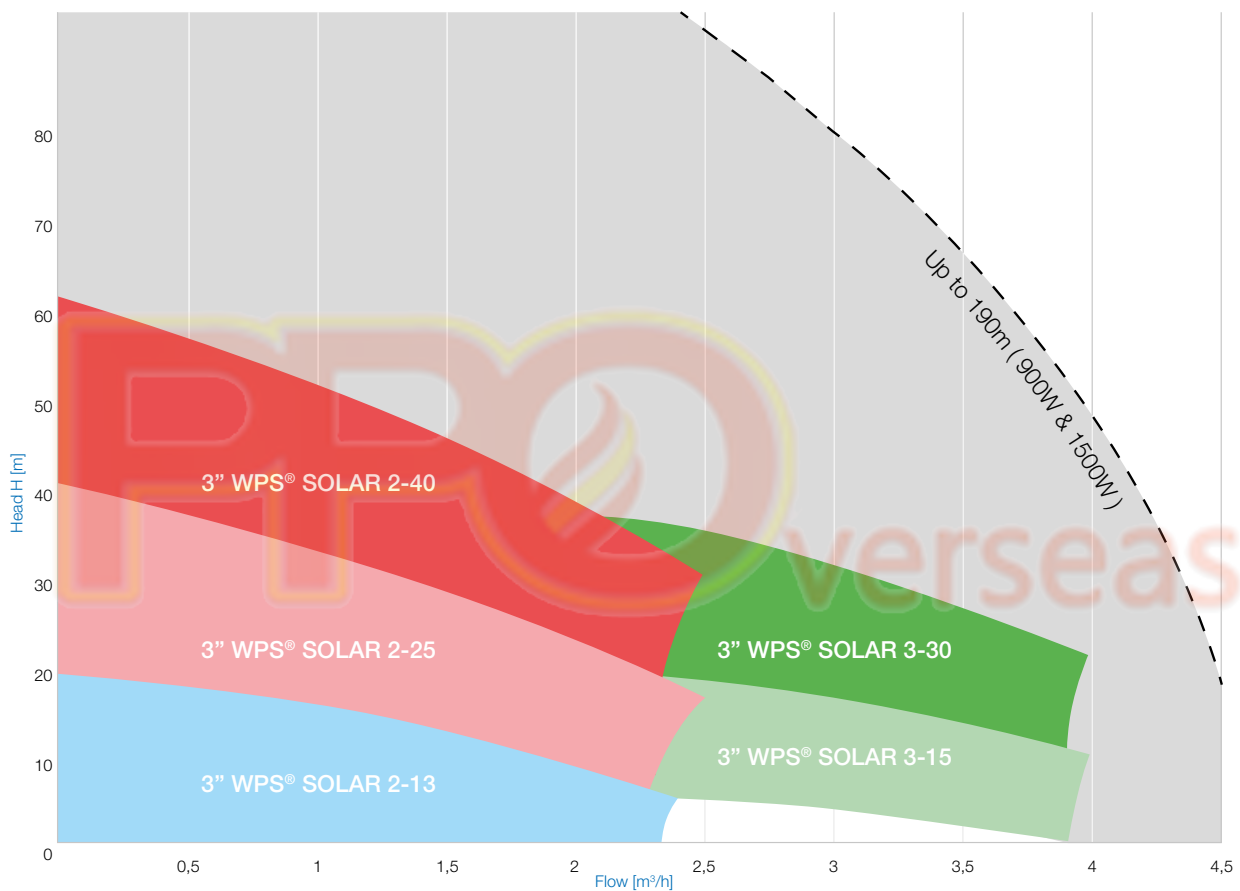


- General On/Off switch
- MPPT (Maximum Power Point Tracking) system, ensuring that the motor is always working at maximum power regarding the Solar power available
- Dry running Protection
- Motor overload and underload Protection
- IP67 general casing
- One auxiliary contact for external level switch





Performance curves for the 3" WPS Solar PMM pack 300W and 600W



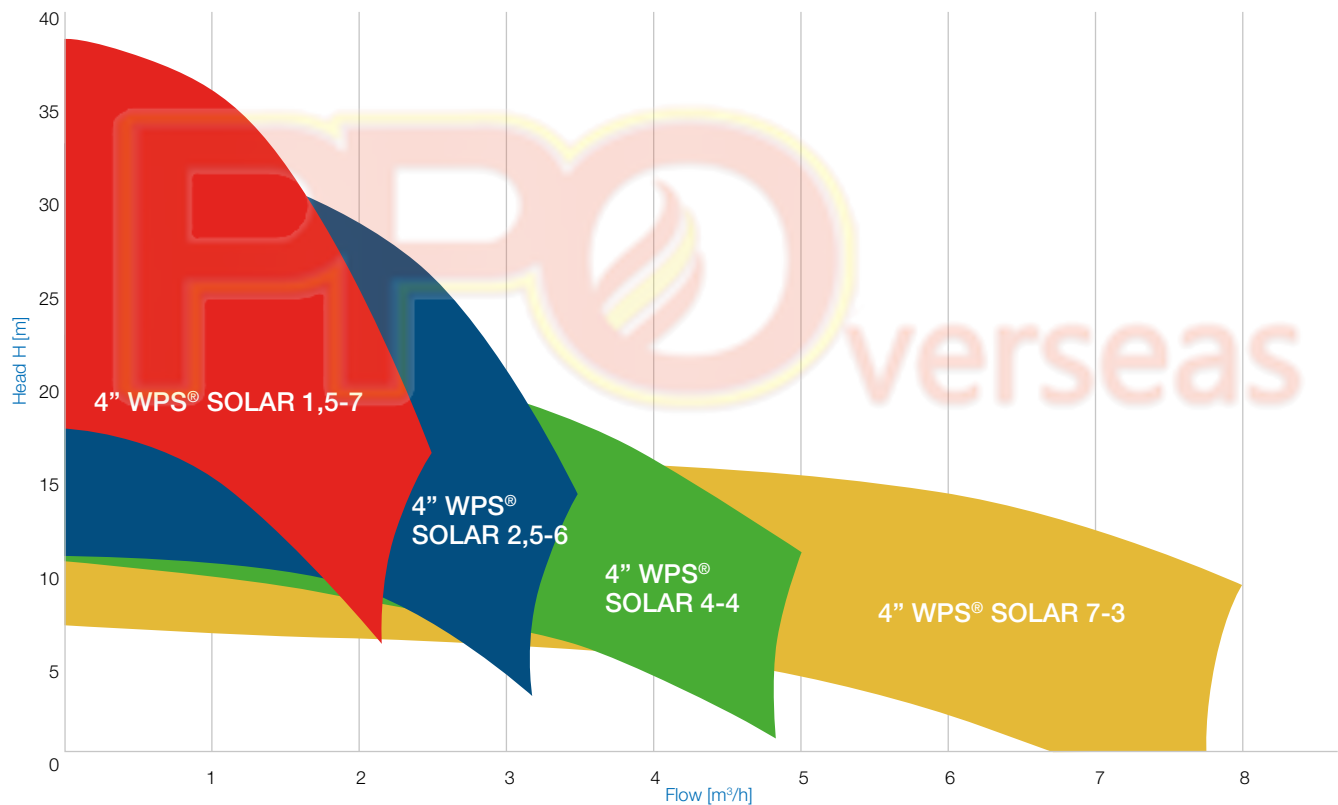
WPS Solar® 3" PMM features

- Suitable for water with a high content of sand (150gr/m³)
- High resistance to wear
- Nominal flow from 0.2 to 7 m³/h
- Head up to 190m
- Exceptional efficiency and excellent starting capabilities

Power boost & energy efficiency

The 4" WPS Eco Pack has been specifically designed to work with 4" WPS pumps that are using a 0,37 kW AC motor. The controller has a specific voltage boosting system, which increase the voltage coming from the solar panels. Thanks to that, the controller works with only 2, 3 or 4 Solar panels to run the pump. This WPS Solar control box also has the following characteristics:

Performance curves for the 4" WPS Solar ECO pack



- General On/Off switch
- MPPT (Maximum Power Point Tracking) system, ensuring that the motor is always working at maximum power regarding the Solar power available
- Dry running Protection
- DC Breaker
- Motor overload and underload Protection
- LED indicators
- IP54 general casing (electric fan included)
- Two auxiliary contacts for external level switches



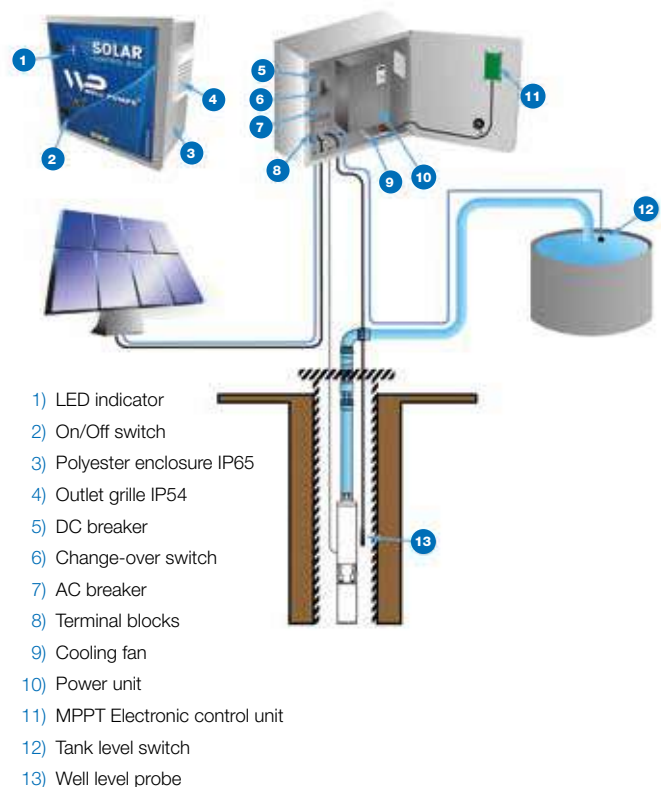
Maximum Power Point Tracking capabilities!

This range of solar control boxes allows you to use solar energy with our full WPS pumps product range, from the 3" to the 10", with motors up to 110kW.



This controller, exclusively made by Well Pumps®, integrates a frequency driver electronically controlled to enable WPS Pumps motor to work on power coming directly from the photovoltaic panels. In their standard version, WPS Solar Control Boxes have the following features:

- General On/Off switch
- MPPT (Maximum Power Point Tracking) system, ensuring that the motor is always working at maximum power regarding the solar power available
- Dry running protection
- DC breaker
- Motor overload and underload protection
- LED indicators
- IP54 enclosure
- Two auxiliary contacts for external level switches



Exemplary solar pump system layout, additional accessories may be needed.

Specificities and dedicated accessories.

Each solar pumping installation is different and required to be studied specifically. Therefore, Well Pumps has developed a sizing tool that takes the following characteristics into account: location, daily flow, total head and the type of solar panels used.



Solar pumping systems have specificities that requires dedicated accessories. Therefore, depending on the installation and your own request, Well Pumps can deliver the following optional accessories:

- AC/DC manual change over. This manual switch to choose between two power source (one AC and the solar panels) when needed.
- Solar Panels. Well Pumps can supply you with Solar panels of different types, specifically chosen to fit the installation requirements.
- Frame for solar panels. A frame can be delivered, for each installation, equipped to fit the amount solar panels required.
- Combiner Box. For installation requiring more than one array of solar panels, a combiner box is needed. This box is assembling all the arrays of solar panels to send them into one line to the control box.
- Fuses and surge arrestors. These options are often advised to protect the control box against over-voltage lightning effects and current overload.
- Output filters. These devices are meant to protect the motor from voltage spikes, depending on the cable length between the control box and the motor.
- Other Pump accessories. All the other accessories that Well Pumps supplies with its pumps and motors are still available for the WPS Solar systems. These accessories can be: submersible cable, level/pressure/flow switch, cooling shrouds, etc.

Solar system for drainage and sewage

Our well Pumps drainage pumps are channel or vortex impellers, made of stainless steel with a cast iron baseplate or simply in cast iron.

They are designed for submerged operations, for temporary or permanent installations.



Applications

- Transfer of water, irrigation...
- Domestic effluents
- Drainage water from flooding
- Water from rivers, lakes or tanks
- Water circulation in cascades

Benefits

- Simple installation
- Low suction
- Reliable
- Free passage from Ø 5mm to 80mm

Features

Maximum Flow	220 m³/h
Head	up to 70 meters
Rated Voltage	3~230 V; 3~400 V; 50 Hz
Rotation Speed	2.900 rpm
Outer Diameter	up to DN 100
Power	up to 43 kW
Enclosure Class	IP68
Insulation	Class F

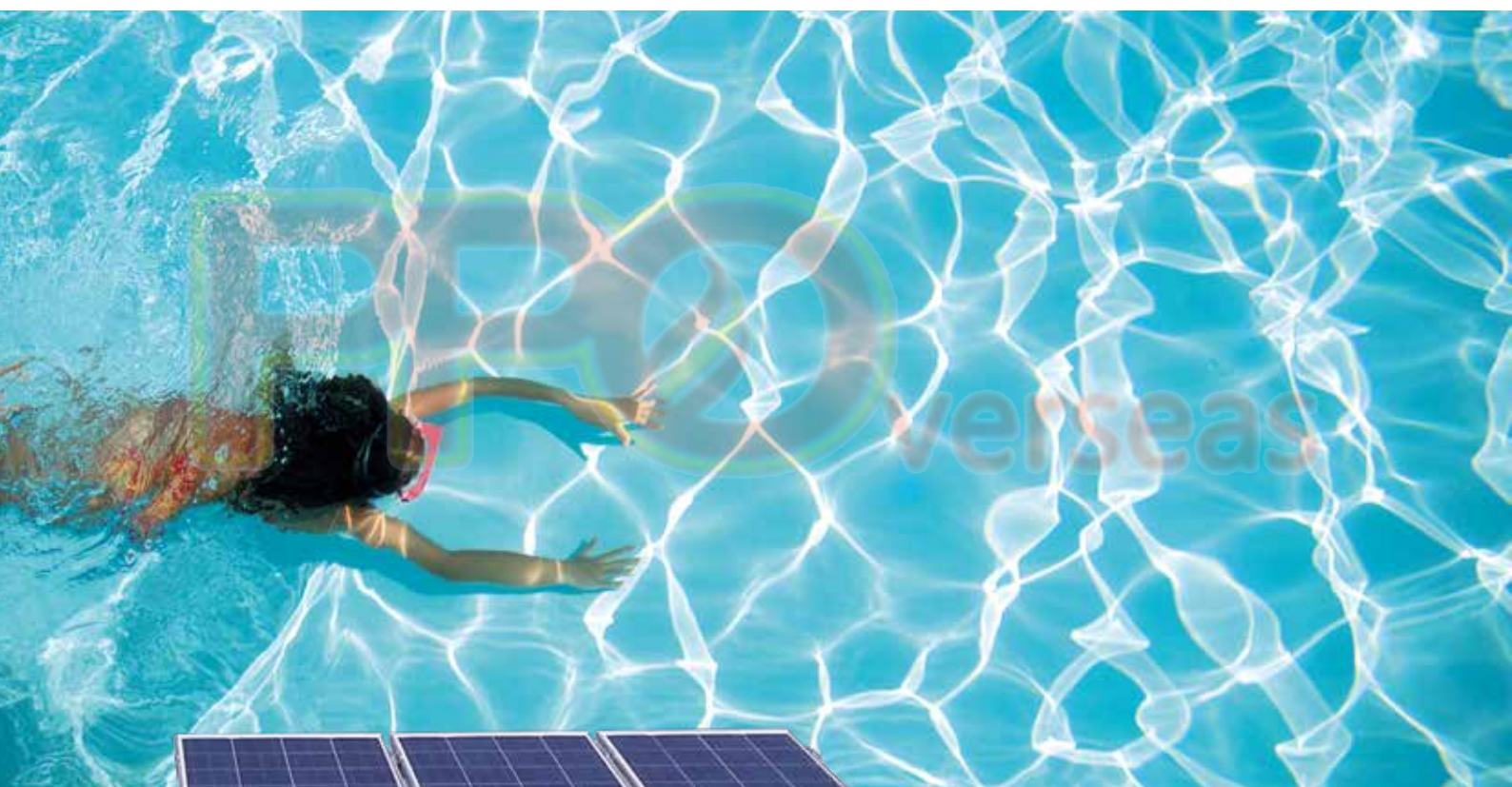


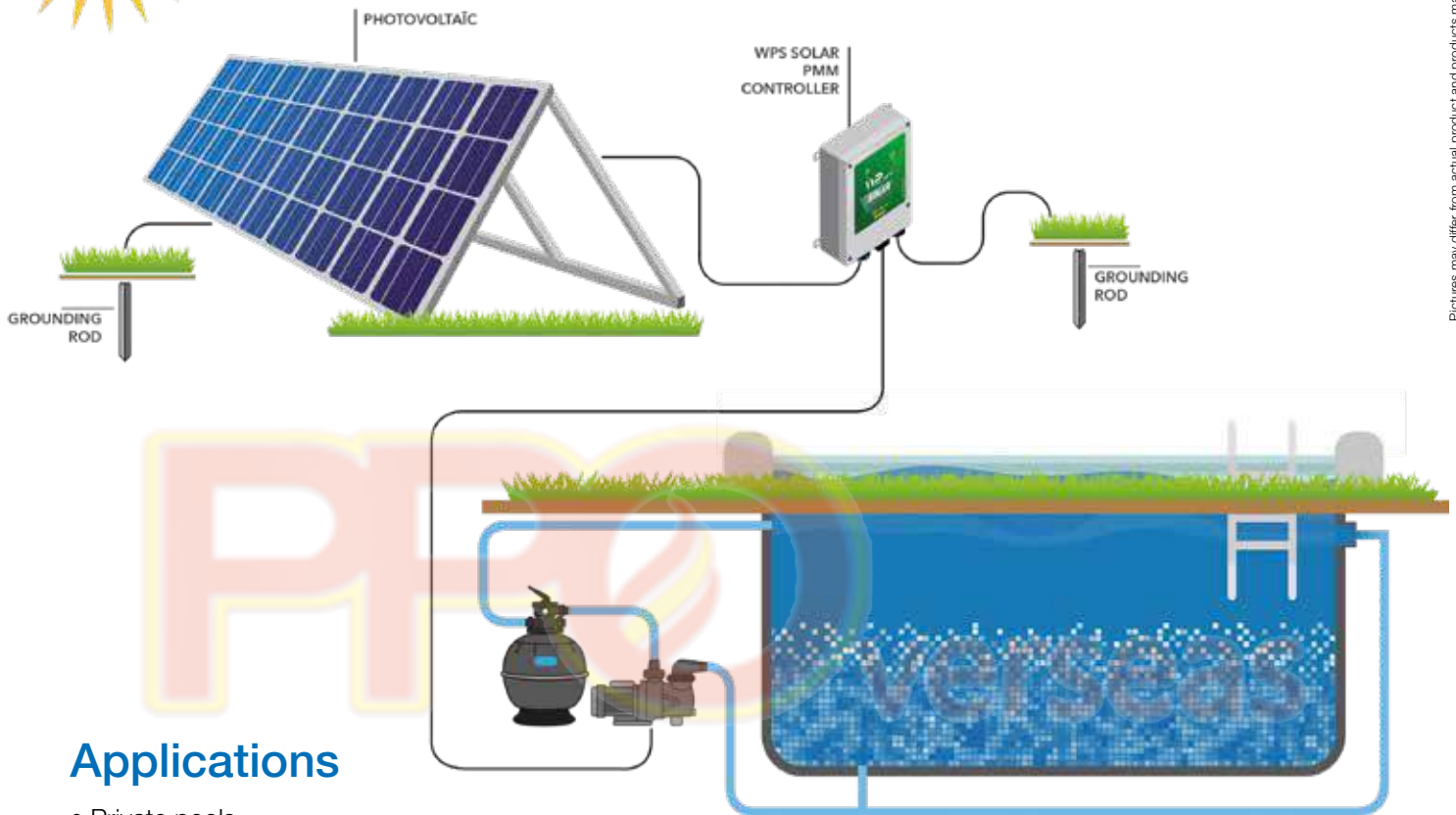
Solar system for swimming pools

Ensure an effective recirculation and filtration of the pool water with the WPS Solar controller, that allows the use of solar energy – a renewable and free source – instead of electrical grid.

The WPS solar system uses a low voltage AC permanent magnet motor to obtain greater efficiency and reliability. By ensuring recirculation of water during daytime, which is the period of higher solar incidence and consequently, the greater spread of bacteria, it guarantees maximum efficiency.

This solution, without energy consumption costs, avoids the use of heavy, powerful treatments and reduces the risk of altering the quality of the water, with significant benefits for the environment.





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Applications

- Private pools
- Condominium pools
- Spas

Advantages

- **Safe** – ensures intense recirculation of the pool water, which prevent the spread of harmful microorganisms to human health.
- **Intelligent** – stand-alone system that goes on and off depending on the solar irradiation.
- **Efficient** – guarantees slower filtering times.
- **Economic** – 100% autonomous solution without any electricity costs.

Features

Maximum Flow	Up to 17m ³ /h
Head	Up to 16 meters
Rated Voltage	3~90 V;
Rotation Speed	3.000 rpm
Inlet connection	50 - 75 mm
Outlet connection	50 - 75 mm
Power	From 0.37 kW up to 0.75 kW
Enclosure Class	IP55
Insulation	Class F

* Bigger power for large volumes also available, please contact Well Pumps

Solar system for surface pumping

The Well Pumps solar surface pumps are designed for photovoltaic energy supply.

In cases of insufficient solar energy, a generator or grid can also be used, as optional power source.

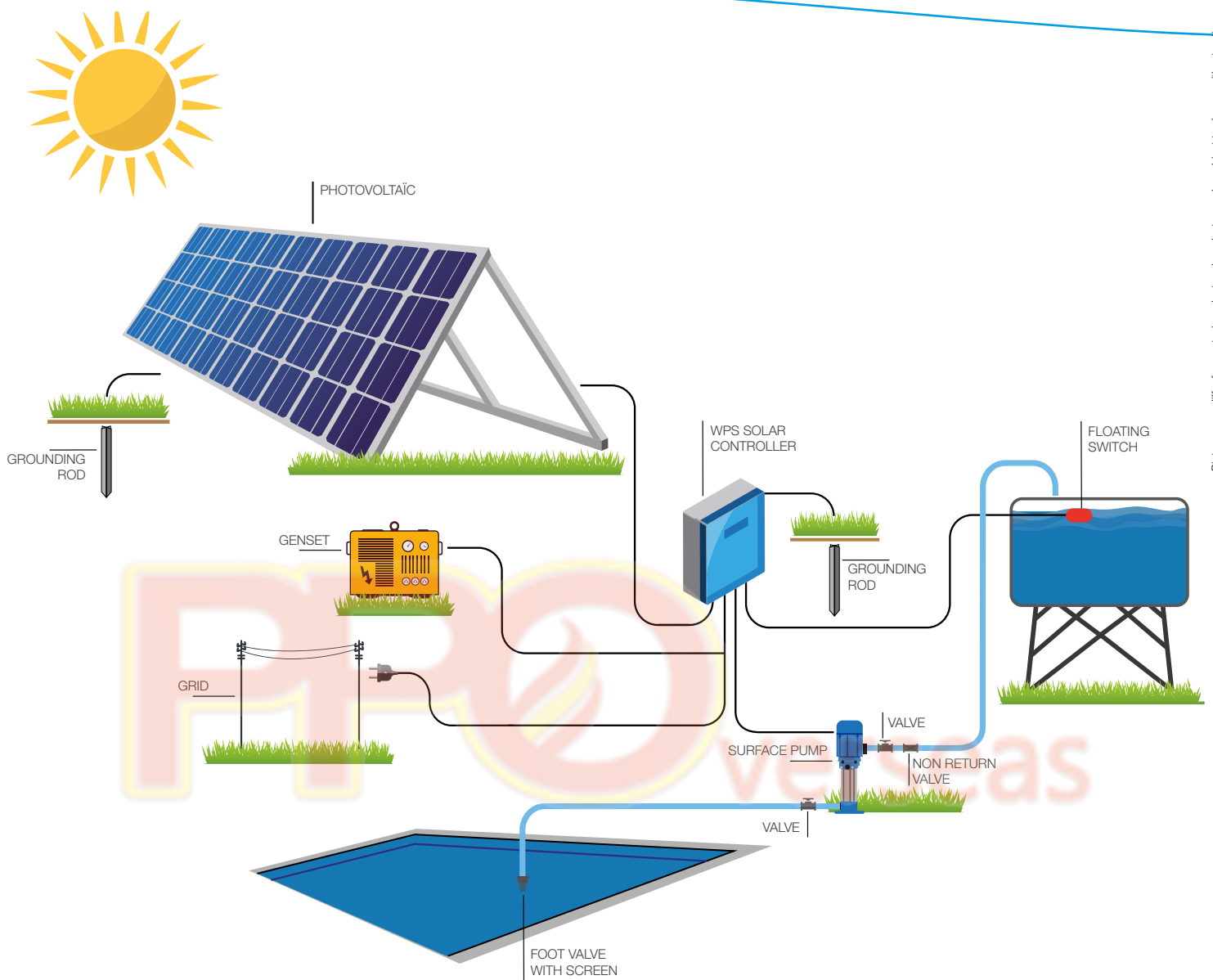
The pump is a non-self-priming, multistage centrifugal vertical pump.



WPSolarSelect Software

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Applications

- Drinking water transfer
- Irrigation in horticulture and agriculture
- Livestock
- Groundwater supply
- Farms and greenhouses

Benefits

- Easy installation
- Simple maintenance
- High reliability
- Bigger solutions upon request

Features

Flow	Up to 160 m ³ /h
Head	Up to 320 m
Rated Voltage	3~230 V; 3~400 V; 50 Hz
Rotation Speed	2.850 rpm
Max. DIN flange	DN 125
Power	Up to 75 kW
Enclosure Class	IP55
Insulation	Class F

WPS SOLAR®

Solar Water Pumping Systems

A solution for every need!



Contact Sales@ppoverseas.es, for the sizing of your own WPS .