

# ZRW SERIES SOLAR PUMPS

## PS600 HR/C

Solar-operated Submersible Pump System, 4" Helical Rotor (HR) or Centrifugal (C) Pump Unit



**LORENTZ** 

### Characteristics

- lift up to 180m
- flow rate up to 11m<sup>3</sup>/h
- simple installation
- maintenance-free
- high reliability and life expectancy
- cost-efficient pumping

### Applications

- drinking water supply
- livestock watering
- pond management
- irrigation
- etc.

### Components

#### Controller PS600

- controlling of the pump system and monitoring of the operating states
- mounted at surface (no electronic parts submerged)
- two control inputs for well probe (dry running protection), float or pressure switches, remote control etc.
- automatic reset 20 minutes after well probe turns pump off
- protected against reverse polarity, overload and high temperature
- speed control, max. pump speed adjustable to reduce flow rate to c. 30%
- solar operation: integrated MPPT (Maximum Power Point Tracking)
- battery operation: low voltage disconnect and restart after battery has recovered
- max. efficiency 92% (motor + controller)
- enclosure: IP 54 (sealed, weatherproof)

#### Motor ECDRIVE 600HR/C

- brushless DC motor
- no electronics inside motor
- water filled
- IP68, pressure balanced, unlimited submersion
- dynamic slide bearings, material: carbon/ceramic
- wetted material: stainless steel (AISI 316), POM, rubber, cable drinking water approved

#### Pump End (PE)

- high life expectancy
- non-return valve
- dry running protection (optional)
- material: stainless steel (AISI 316), rubber

#### HR Pumps Only

- helical rotor pump (positive displacement pump)
- two main parts only: stator and rotor, field serviceable
- stator: geometry made of abrasion resistant rubber
- rotor: stainless steel, hard chrome plated, abrasion resistant
- more resistant to damage by sand than other pump types
- self-cleaning



### Performance

PS600	HR-03	HR-03H	HR-04	HR-04H	HR-07
article #	1040-X	1045-X	1050-X	1055-X	1060-X
lift [m]	0-140	140-180	0-80	80-140	40-90
max. flow rate [m <sup>3</sup> /h]	0.5	0.5	0.8	0.8	1.2
max. efficiency [%]	60	64	60	65	64
solar operation	nominal voltage 48-72V DC, open circuit voltage max. 150V DC				
solar generator [Wp]	300-480	420-900	300-480	420-900	420-900
battery operation	nominal voltage 48V DC				

PS600	HR-10	HR-14	HR-20	C-5J5-8	C-5J5-5
article #	1065-X	1070-X	1080-X	1292	1293
lift [m]	30-60	0-50	0-30	0-25	0-18
max. flow rate [m <sup>3</sup> /h]	1.9	2.7	3.6	7.5	11.0
max. efficiency [%]	64	65	64	47	47
solar operation	nominal voltage 48-72V DC, open circuit voltage max. 150V DC				
solar generator [Wp]	420-900	300-900	420-900	300-900	300-900
battery operation	nominal voltage 48V DC				



### Other Products in the ZRW Range



Solar Panels



Inverters



Solar Streetlights



Solar Batteries



Solar Pumps



Accessories

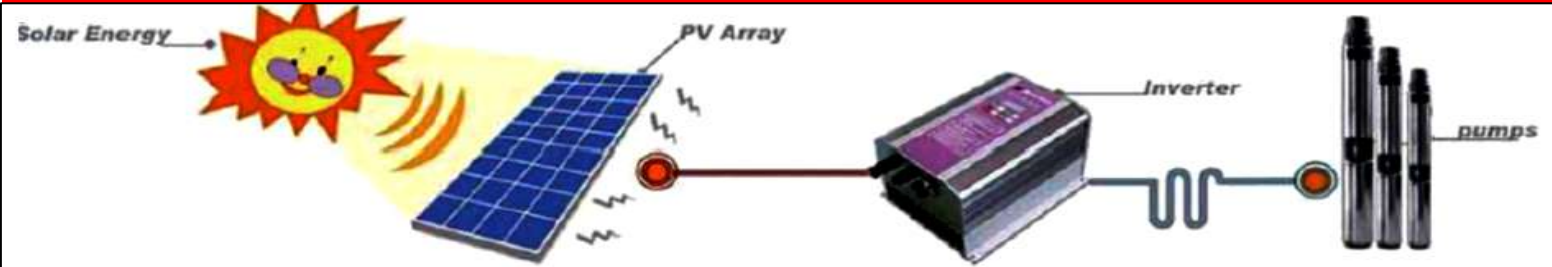


Solar Controllers



LED lights

# ZRW GLOBAL SERIES PHOTOVOLTAIC SOLAR PANELS



## PS1800 Centrifugal Pumping Systems

### General Data and Sizing Tables

The curve show the performance range of 4 models at 1800Wp solar array

- irradiation of  $6\text{kWh/m}^2$  on a tilted surface
- ambient temperature  $30^\circ\text{C}$

Solar tracking will improve performance by aprox 40% in summer month's

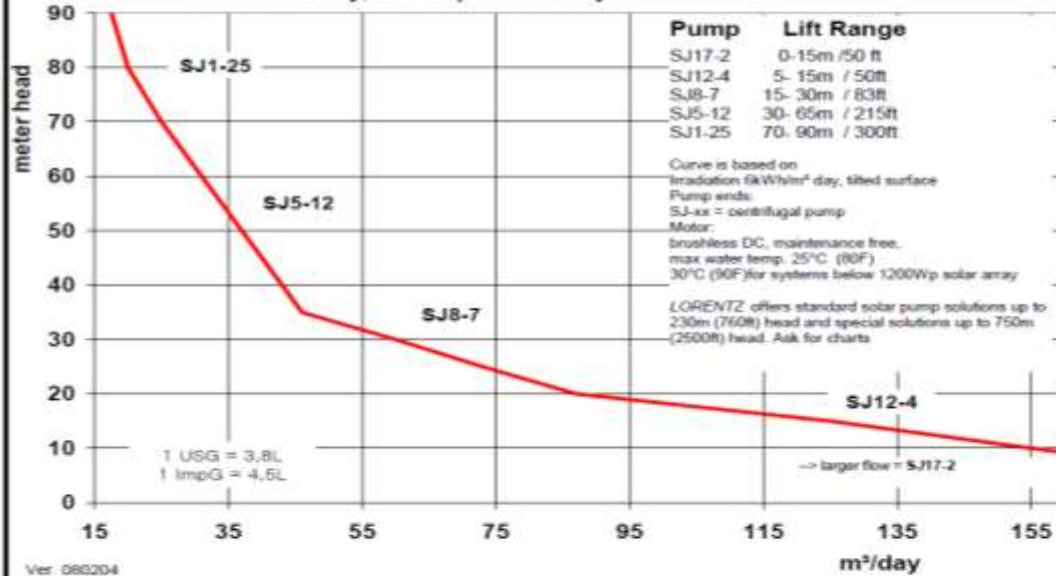
#### Application:

- drinking water supply
- livestock watering
- pond management
- irrigation
- village water supply



### Solar Pumping System / Capacity Diagram

6kWh/m<sup>2</sup>/day, 1800Wp solar array



#### Controller PS1800

- controlling of the pump system and monitoring of the operating states
- mounted at surface (no submerged electronic parts)
- two control inputs for well probe (dry running protection), float or pressure switches, remote control etc.
- automatic reset 20 minutes after well probe turns pump off
- protected against reverse polarity, overload and high temperature
- speed control, max. pump speed adjustable to reduce flow rate to approx. 30 %
- solar operation: integrated MPPT (Maximum Power Point Tracking)
- battery operation: low voltage disconnect and restart after battery has recovered
- max. efficiency 92 % (motor + controller)
- enclosure: IP 54 (sealed, weatherproof)

#### Motor EC DRIVE 1200 HR / C

- brushless DC motor
- no electronics inside motor
- water filled
- IP68, pressure balanced, max. submersion unlimited
- dynamic slide bearings, material: carbon/ceramic
- wetted material: stainless steel (AISI 316), POM, rubber, cable drinking water approved

#### Pump End (PE)

- high life expectancy
- none-return valve
- dry running protection (optional)
- material: stainless steel (AISI 316)

Errors excepted and possible alterations without prior notice



### Other Products in the ZRW Range



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