



# LORENTZ PS2-100

Self-install, high efficiency solar pump system

*A retail ready pump system  
to expand your business  
opportunities*



## *pick it up*

a ready to go,  
system in a box



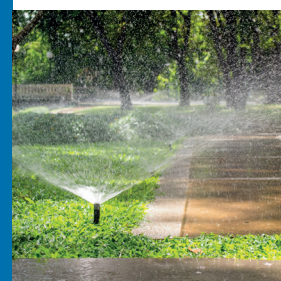
## *plug it in*

no wiring to do, just  
plug in and go



## *pump water*

from any source:  
pond, stream, well



**LORENTZ PS2-100 is a high quality, high efficiency, cost effective solar pump system designed for self-installation**

LORENTZ PS2-100 is a system that sets a new level of quality and reliability for small pumping systems. This pump system allows LORENTZ Partners to access a market segment that was previously served by poor quality, poor performance or consumer only type products.

This submersible pump is flexible to serve a wide range of flow and head requirements and designed for the long life needed in productive use cases such as livestock water and irrigation.

There is a simple message for your customers:

**pick it up,  
plug it in and  
pump water.**

***The Solar Water Pumping Company***

## New opportunities with a self-install pump



### Serving the smaller applications

The PS2-100 is a small 100W system designed to fit mass market low cost systems. This off the shelf product provides a solution which is very simply deployed and self-installed (no wiring, cable splicing or special connections required!). This solution complements the LORENTZ professional channel model while extending access of LORENTZ products to more customers.

### “System in a box” with customizable retail sleeve

This solution comes in a single box design (600 x 160 x 230 mm) making it simple to stock and sell. It includes the controller, pump unit, cable with motor plug and the MC4 adapter cable. The multi-language retail sleeve wrapped around the box allows for use in several countries and provides space to add any desired local information for retail use.

### Perfect for any water application and diverse environments

The PS2-100 system provides over 20,000 liters of water per day and pumps up to 40 meter heads. Being a submersible pump, it can be used in various water sources such as wells, ponds, rivers, lakes or tanks. Common applications include livestock water, irrigation, gardens and households. With a small size and plugged connections it is easy to move the pump from place to place.

### Efficient and long lifetime

The PS2-100 maintains the LORENTZ and Partner standard of extremely high-quality materials, reliability and efficiency for optimum performance and a long lifetime.

Although it is a small system it still has many of the same components as LORENTZ larger systems and still has the build quality and attention to detail you would expect.

# Features and description

## General description

- high efficiency solar powered water pumping system
- submersible helical rotor pump and high efficiency DC brushless motor
- plugged connections for customer self-install
- replaceable cables for long life
- multiple pump ends to match local pumping requirements: HR-07/-14/-23
- maximum 40 m head and 2.8 m<sup>3</sup>/h flow rate

## Dimensions and weights

### Pump unit

- length 455 mm
- width (diameter) 88 mm
- weight 5.5 kg

### Controller

- height 29 mm
- length 115 mm
- width 122 mm
- weight 700 g

## Materials

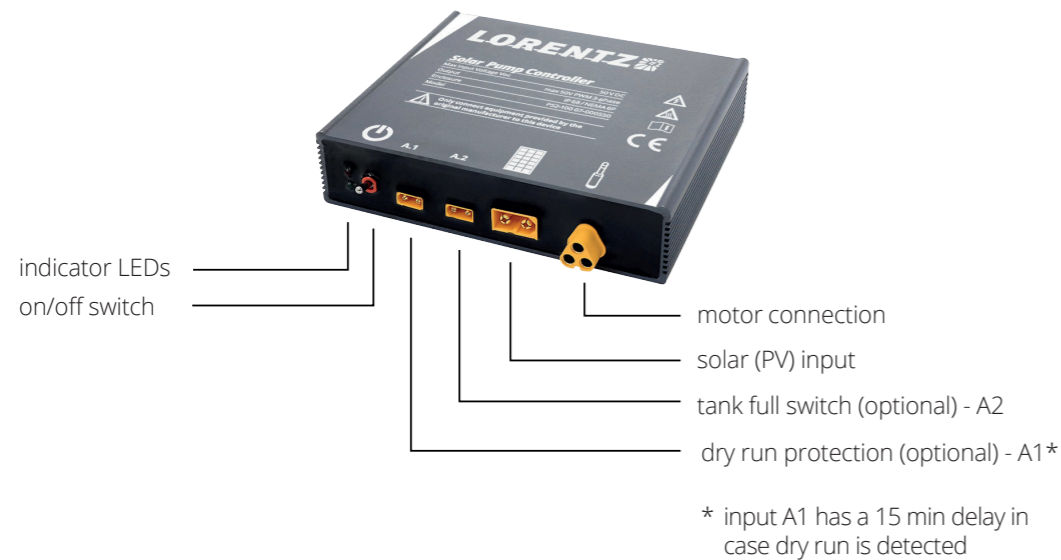
### Pump unit

- motor cast stainless steel
- rotor solid stainless steel
- stator housing polyphenylene sulfide with glass fill
- water filled motor

### Controller

- aluminum housing
- fully resin encapsulated

# Controller connections



# Equipment

## Included

- controller with inputs for PV, pump, run dry protection and tank full float switch
- motor with socket
- helical rotor pump
- motor cable with plug (15 m)
- bracket for controller mounting under PV module
- solar input to MC4 adapter cable

## Optional

- PV modules
- well probe for dry run protection with cable
- float switch for tanks with cable
- 15 m motor extension cable with plug
- 15 m well probe / float switch extension cable with plug

## PV Module options

This system would typically be powered by a single 60 or 72 cell module in the power range of 180 Wp to 260 Wp (larger is also ok). The maximum input voltage Voc is 50 VDC. Where systems need to be mobile, folding module sets are a good solution. LORENTZ have an LC-200 portable module kit available.

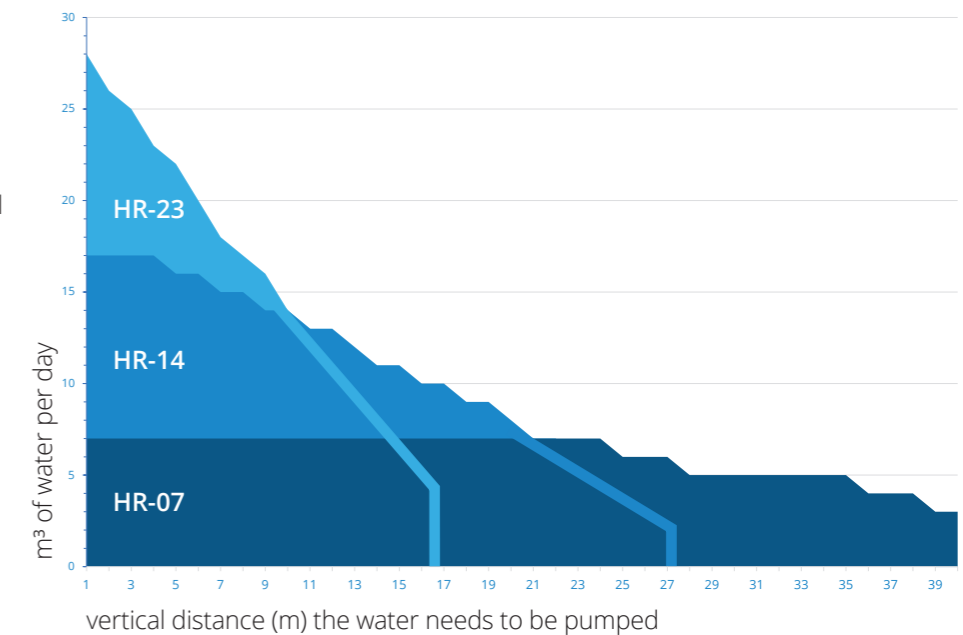


# Three pump variants: HR-23, HR-14, HR-07

There are three different pumps to choose from in the PS2-100 range: HR-23, HR-14 and HR-07.

The chart shows the daily water that will be pumped at different vertical heads.

Measure the vertical distance that you need to pump water and look on the bottom axis, read across to the left to see how much water to expect per day.



Data provided is the annual daily average based on using a single 205 Wp PV module at location 15N 0E. There are three pump end variants that cover the range of head and flows, please ask your retailer for advice on choosing the one to meet your needs.

## Technical data

### Controller

power	max. 0.15 kW
input voltage	max. 50 V
optimum Vmp**	> 34 V
motor current	max. 6.0 A
efficiency	max. 98 %
ambient temp.	-40 ... 50 °C
Enclosure class	IP68

### Motor ECDRIVE 100-AHR-S

rated power	0.15 kW
efficiency	max. 83 %
motor speed	700 ... 2,500 rpm
insulation class	F
enclosure class	IP68
submersion	max. 50 m
maintenance-free brushless DC motor water filled	premium materials, stainless steel: AISI 304

\*\*Vmp: MPP voltage under Standard Test Conditions (STC): 1,000 W/m<sup>2</sup> solar irradiance, 25°C cell temperature

## Plug in accessories to extend application use

A range of accessories are available for the PS2-100 pumps. All accessories have plugged connections to make installation simple for the customer. The well probe accessory prevents the pump from running dry and the float switch allows for pump control when a tank is filled.


The well probe and float switch accessories come with fixed length cables. An extension cable is also available which uses an innovative “no tool” joining system to provide a waterproof and mechanically good connection.

A motor extension cable is also available allowing customers that need to have longer distances between the pump and controller to accommodate this without the need for cable splicing. The motor extension uses a similar “no tool” connector.





## How customers are using the PS2-100


pumping from wells, rivers, ponds or tanks




irrigation for smallholdings and gardens











livestock water



drinking water for homes and communities



## About LORENTZ

LORENTZ is the global market leader in solar powered water pumping solutions. Founded in Germany during 1993 LORENTZ has pioneered, innovated and excelled in the engineering and manufacturing of solar powered water pumping. Today LORENTZ is active in over 130 countries through a dedicated network of professional partners. LORENTZ technology uses the power of the sun to pump water, sustaining and enhancing the life of millions of people, their livestock and crops.

Simply – **Sun. Water. Life.**



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