LORENTZ

S1-700
Solar powered water pump



S1-700 is a high quality, high efficiency, cost effective solar water pump system designed for self-installation and optimized for retailers and online sales.

This submersible pump can be used to provide water for people, animals or crops - directly powered by clean, renewable solar energy.

S1-700 can easily be installed by anyone, no special expertise or tools are required. It is as simple as: pick it up, plug it in, pump water.

SOLAR WATER PUMPING MADE SIMPLE

www.lorentz.de/s

A small pump for anyone and any application

Why are solar water pumps exciting ?

Solar water pumps move water using the power of the sun. This means they work with clean, free and renewable energy in any location.

Compared to a pump run by diesel or electricity, using a solar pump saves money, provides grid and fuel independence and protects the environment.

Solar water pumping is a well established technology but is seeing fast growth as the benefits become widely known.

Simple to ship, stock, sell and install

LORENTZ have taken their knowledge and experience to build a high quality, long-lasting, efficient product that is simple to ship, stock, sell and install.

The S1-700 comes in a single box which is easy to stock, retail and ship.

The system has been designed for simple self installation with all aspects of the product and support material focused on simplicity.

Plug and play, no previous technical knowledge is required, no tools, no wiring, it is “solar water pumping made simple”.

Why choose a LORENTZ pump

If you opt for LORENTZ you receive a solar water pump which works out of the box, is reliable, highly efficient and is made with premium material.

We started designing pumps in Germany in 1993 and can look back at 30 years of experience in designing and manufacturing solar water pumps and accessories. Today, LORENTZ is the global leader in the solar water pumping market.

Millions of people, their animals and crops rely on LORENTZ pumps every day.







Benefiting a wide range of customers

S1-700 can be used anywhere that water needs to be pumped, typically in areas with no power or where power is expensive or inconvenient to access.

S1-700 can be used across a wide range of applications. The most popular uses are for drinking water for homes, water for livestock or for irrigation applications.

Customers can pump from water sources such as a well, pond, river or lake. Pumps will provide up to 94,000 liters [24,800 US gal] of water per day and pump up to 40 meter [130 ft] head, depending on the installation conditions.



















Features and scope of delivery

S1-700 solar water pumping system

Product features include:

- submersible centrifugal pump
- high efficiency DC brushless water filled motor
- plugged connections for simple self-install
- maximum 40 m [130 ft] head and maximum 9.4 m^3/h [41 US gpm] flow rate
- two pump ends to match local pumping requirements: CST-4-6 and CST-2-10
- outdoor rated controller (IP68) designed for temperatures to 45 °C [113 °F] ambient
- sophisticated MPPT for maximum performance
- accessory inputs for automating the system
- on-board data storage and Bluetooth™ connectivity for pump control and info

All in one box

S1-700 is provided as a kit in a single box. The only addition is to add PV modules to suit local market applications and any optional accessories the customer might need.

Box content

- controller with inputs for PV modules, pump, dry run protection and tank full switch or remote tank switch
- Bluetooth™ connectivity
- centrifugal pump with 8-pole high-efficiency brushless ECDRIVE DC motor with 15 m [50 ft] cable and plug
- a manual with links to helpful videos and FAQ (**www.lorentz.de/shelp**)

Dimensions and weights

S1-700 systems are shipped in pallets of 21 systems.

Single pallet:

- dimensions 1200 x 800 x 1100 mm [47.2 x 31.5 x 43.3 in]

Single S1-700 system:

- dimensions 1080 x 265 x 130 mm [42.5 x 10.4 x 5.1 in]
- volume 0.037 m^3 [1.3 ft^3]
- gross weight CST-4-6 17.4 kg [38.3 lb] CST-2-10 16.7 kg [36.8 lb]

PV modules

An S1-700 system would typically be powered by 3 PV modules in the power range of 250 Wp to 550 Wp (larger is also Ok).

The maximum input voltage (Voc) is 220 V DC.

LORENTZ stock 100 Wp modules in packs of 2. These are a perfect size to avoid oversized shipping charges and are a convenient size where some portability is required. Modules are provided on a pallet with 54 sets of 2 modules.







S-Connect App for real-time info and control

Control the pump with LORENTZ S-Connect

The LORENTZ S-Connect app allows the customer to see in real time what the pump is doing, change settings or even export performance data. Connecting via Bluetooth™ shows current water flow, daily amount of water pumped, power and speed.

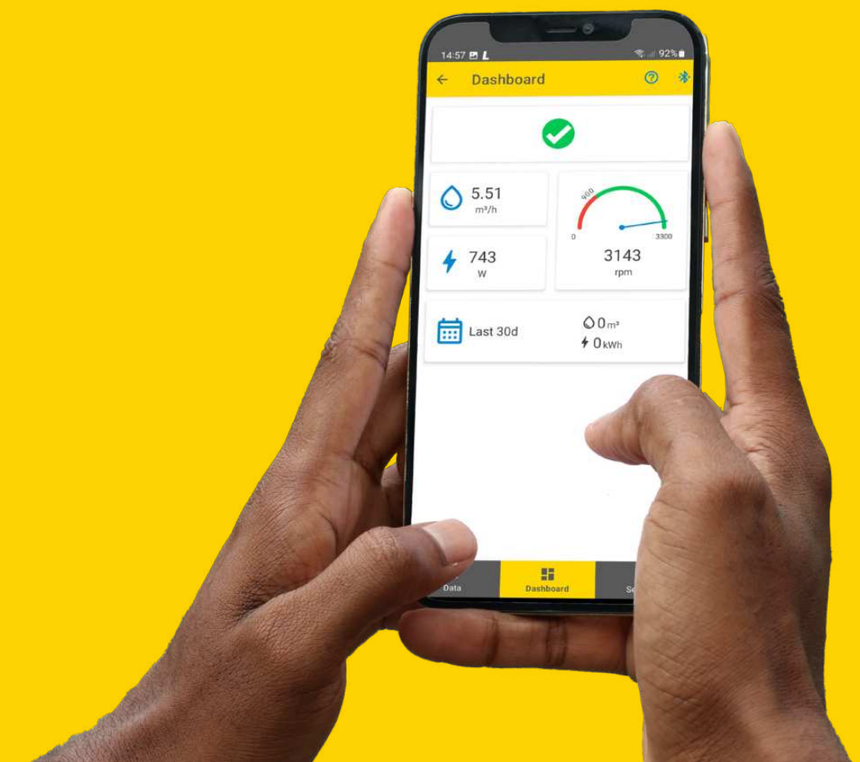
Using the LORENTZ S-Connect app the customer can control the pump by setting a timer, control flow with a maximum motor speed or set a maximum daily amount of water.

The LORENTZ S-Connect app is available for Android devices on the Google Play Store or IOS devices on the App Store. There is a demo feature that allows the app to be used before purchasing a pump system.

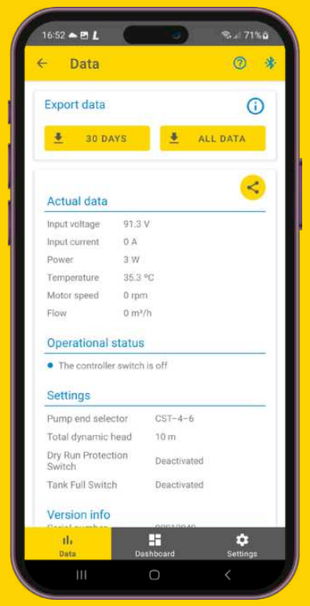
LORENTZ S-Connect also has features that support the customer with links to FAQ content. Firmware updates and technical data downloads are also included to assist with troubleshooting and support.

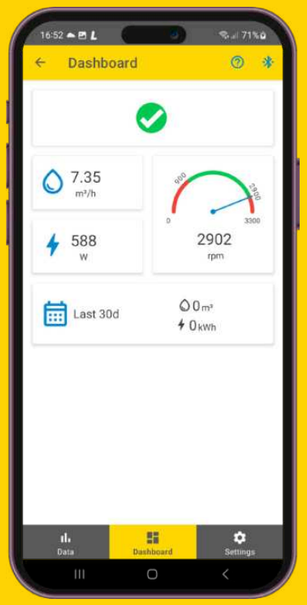
GET IT ON Google play

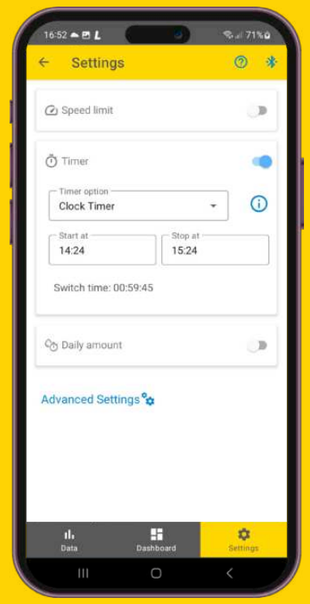
Download on the App Store

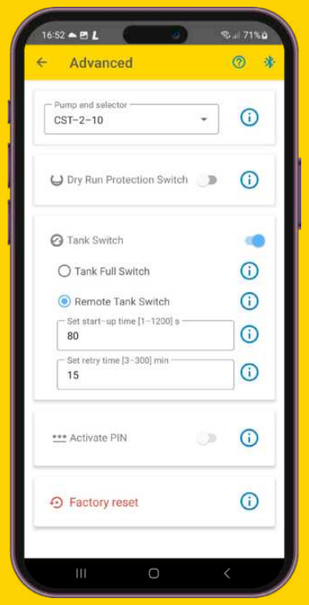


Simple control and configuration









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Example installation with basic components

S1-700 used to irrigate a field

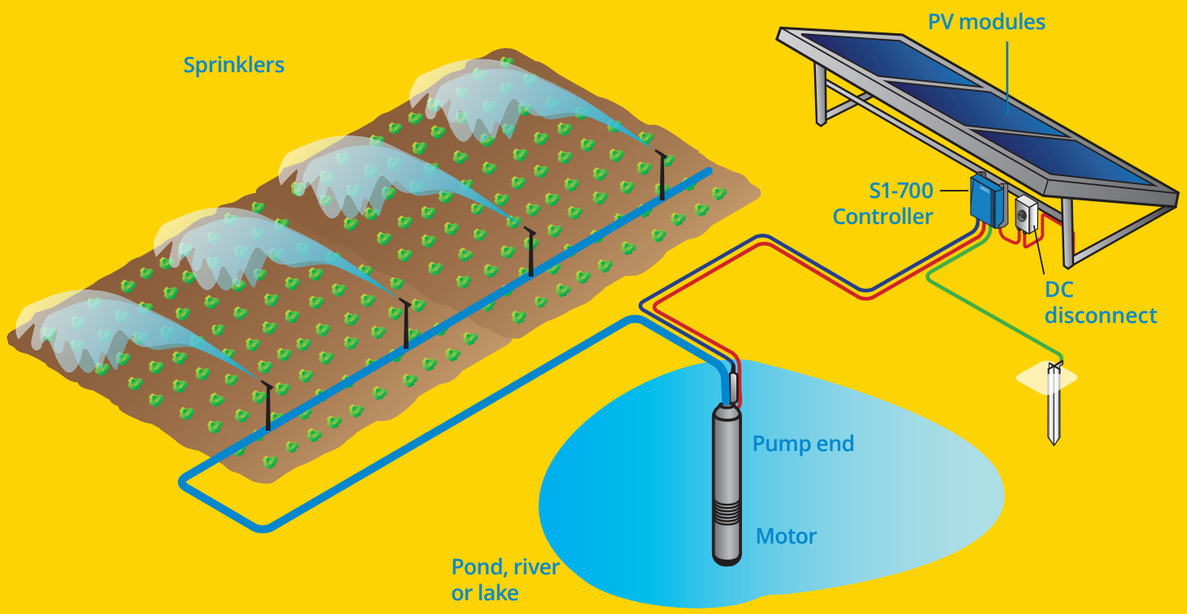
The picture below shows a simple “out of the box” example of an S1-700 pump system providing water to irrigate a field via sprinklers.

The pump is installed in the water source which is in this example is a small lake.

The red line represents the power cables and shows the connection from the pump to the controller. The controller can be fixed to the mounting structure of the PV modules, to wall or post. It is fully weatherproof.

The blue lines represent the water pipes.

The pump will run during daylight hours. Timers, flow limits or daily amounts can be set on the pump system to manage water.



Extending uses with simple accessories

S1-700 used to fill a tank

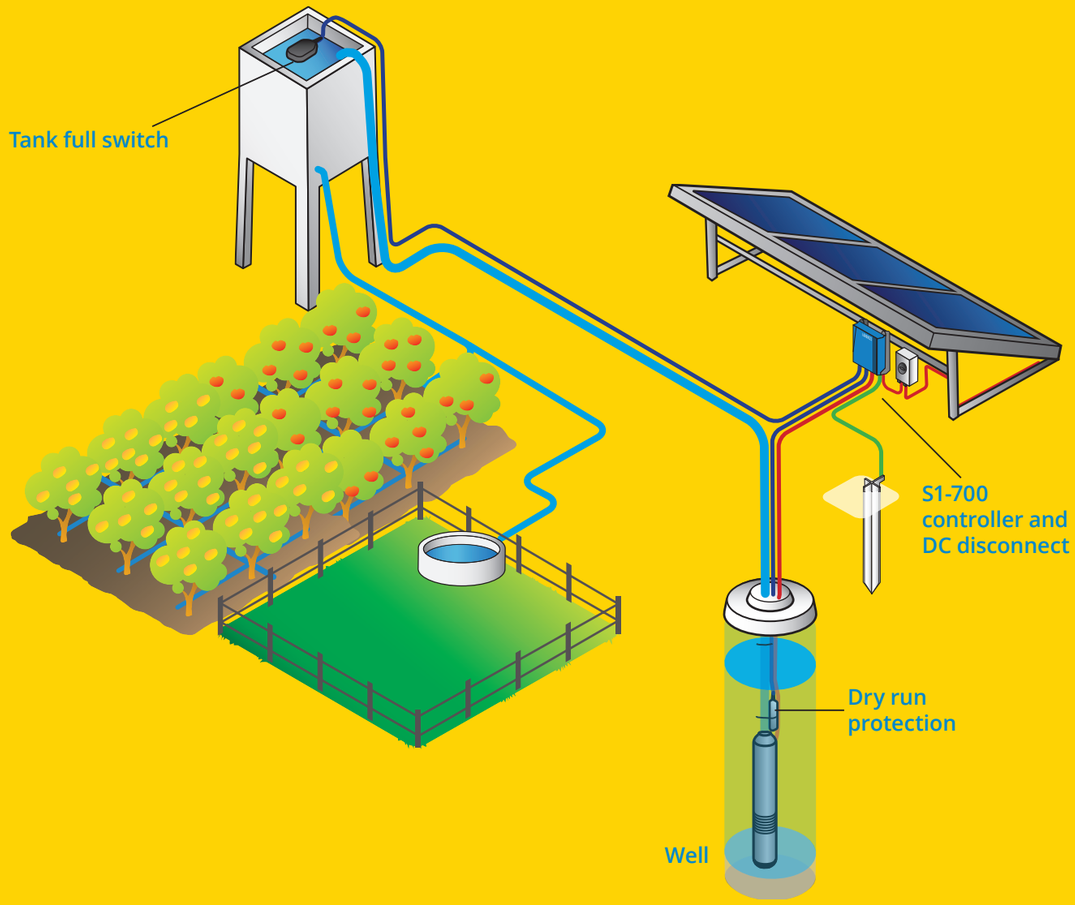
The picture below shows an S1-700 pump system pumping water to a tank. The tank stores water, and as it is elevated provides water throughout the day and night.

This system has the addition of two accessories. These accessories plug into the S1-700 system, no wiring is required.

As the pump is installed in a deep well a dry run protection accessory is installed. This will switch off the pump if the well has no water.

A tank full switch accessory is installed in the tank. This will stop the pump when the tank is full, avoiding wasted water.

Additionally, it is possible to automatically control the filling of remote tanks using the remote tank switch accessory. This is used when the tank being filled is too far away to use a tank full switch accessory.



Amazing Performance

Even though S1-700 is a relatively small-sized system it has a great performance.

There are two variants to choose from in the S1-700 range depending on the how the pump will be used and the amount of water needed.

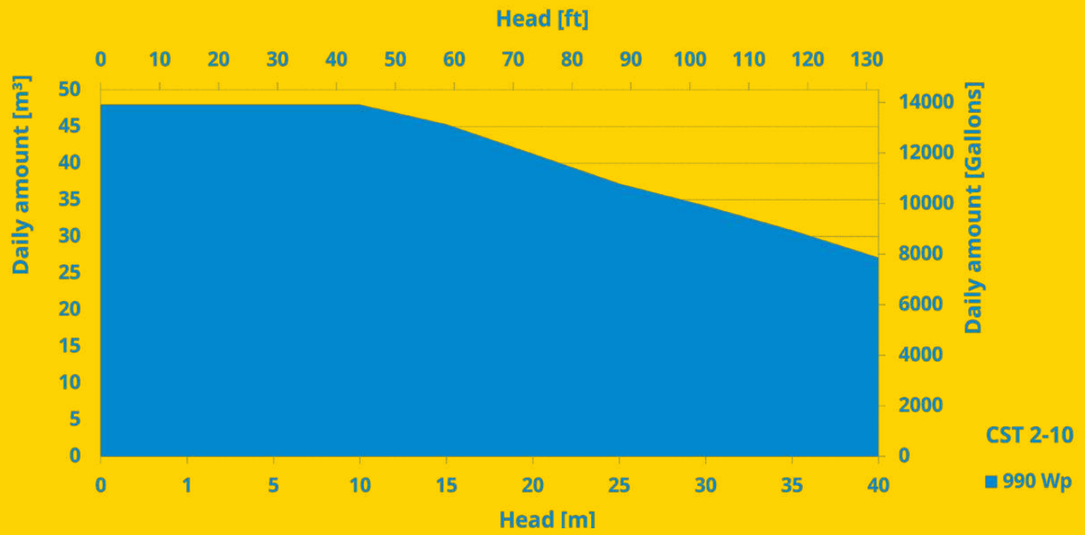
The charts show the performance of both pumps powered by 3 x 330 Wp as an example.

Measure the vertical distance that you need to pump water and look at the bottom or top axis (depending on whether you handle length units in meters or feet), then read to the left or right (depending on whether you handle water volume in cubic meters per day or gallons per day) to see the amount of water you can get per day.

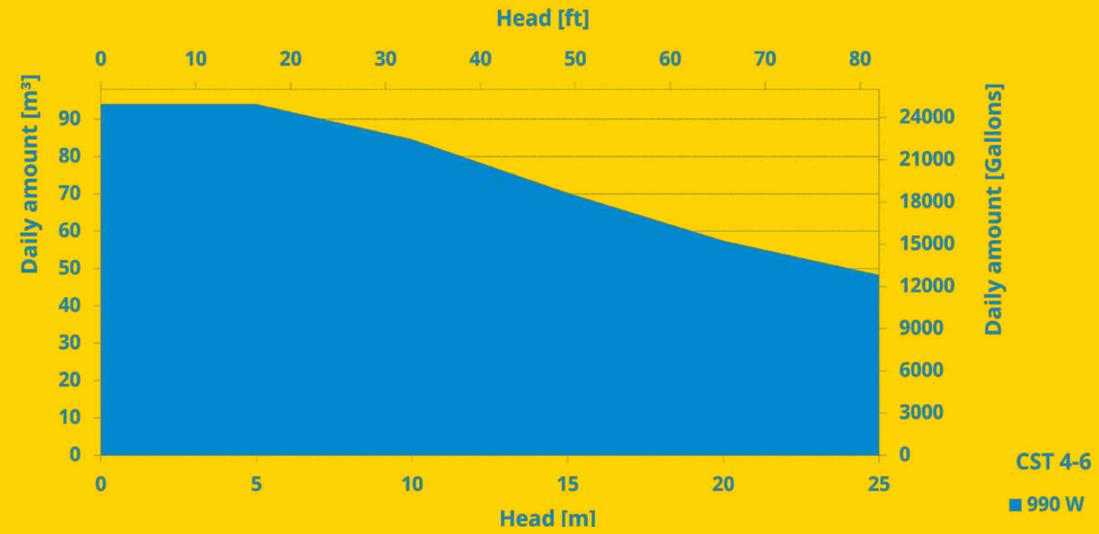
If the S1-700 does not meet your customer needs LORENTZ have a wide portfolio of solar water pumps.

Contact us so that we can find the right system for your customers requirements.

Daily water output of an S1-700 CST-2-10 system powered by 3 x 330 Wp modules



Daily water output of an S1-700 CST-4-6 system powered by 3 x 330 Wp modules



Supporting distributors

New opportunities

Adding a new product line to your portfolio always has risk. Will it sell? Will it create support issues? Is the supplier reliable? LORENTZ have always gone to market through local partners, we don't sell our products directly.

Our focus is on supporting partners to serve the local market.

Channel friendly company

We provide distributors with partnerNET access, this is our extra-net for distributors containing promotional materials, prices, ticketing etc, a simple way to conduct business.

Our channel management team will train your team on products and share go to market experience to help you succeed.

Product design

LORENTZ S systems are designed for retail and e-tail. These products have simple instructions, are plug and play and reliable in use.

We have challenged ourselves to make solar water pumping simple.

Customer self support

Customers today demand high quality self support content. The **www.lorentz/de/shelp** sites provide this with clear information, videos and articles for self support. If self support fails customers can raise an inquiry which will be answered by LORENTZ staff.

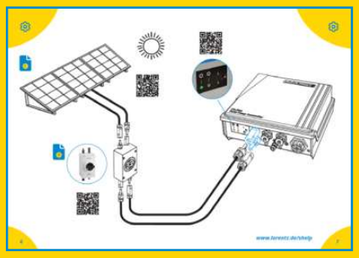
Consistent product supply

LORENTZ have been in business for 30 years and supply consistent quality products. We know how important consistency is for supply and support to your customers.

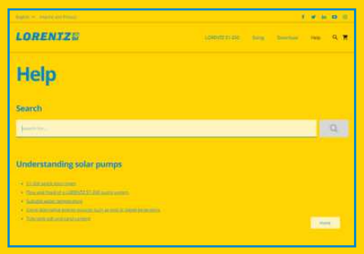
S1-700 is part of a planned range of products that will expand to offer you more opportunities to serve a wider range of customers in the future.

Spare parts and consumables

Distributors have access to a wide range of spare parts and consumables. Cables, clips, nuts and bolts, motors, pump parts are all available without premium pricing.



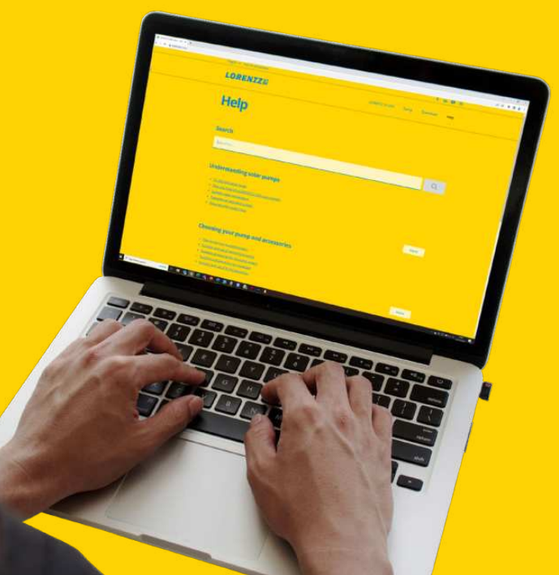
Pictorial manuals

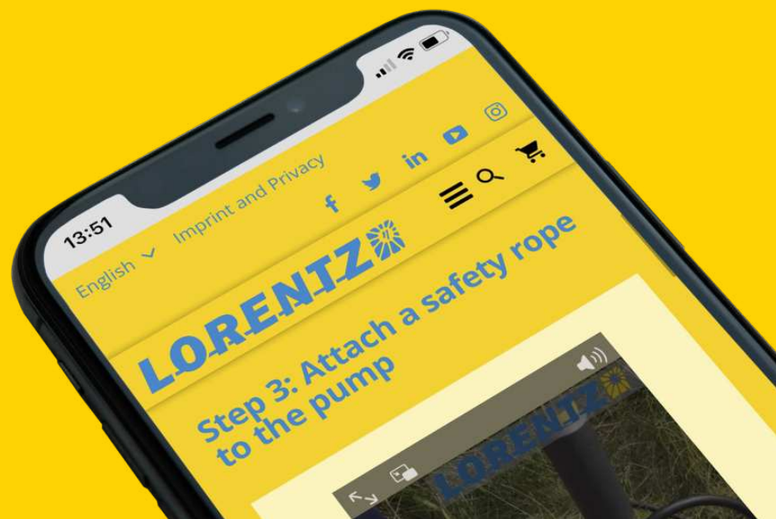


www.lorentz.de/shelp



Help videos





Accessories

S1-700 pumping system offers a range of accessories that enable you to achieve a fully automated installation. These accessories feature convenient plug-in connections, making the installation process quick and simple, without the need for complicated splicing or procedures.

The dry run accessory prevents the pump from running dry.

Dry run protection
Includes 15 m [50 ft] of cable



Accessory extension cable
Includes 20 m [65 ft] of cable



The tank full switch allows control of the pump when a tank is filled, and if the tank is too far away, the remote tank switch accessory can be used.

An accessory extension cable is also available which extends the cable lengths and uses high quality plugs for a weatherproof connection. The motor cable can also be extended when

Tank full switch
Includes 10 m [33 ft] of cable



Motor extension cable
Includes 20 m [65 ft] of cable



the installation requires long distances between the pump unit and the controller, without the need for connection boxes, joints, or cable splicing.

And the DC Disconnect enables the safe isolation of the PV power source during installation, servicing, or emergencies, ensuring the protection of people and the system.

Remote tank switch
Includes 3 m [10 ft] of cable



DC Disconnect
Designed for use with S1-700



Design choices

30 years of off-grid solar pumping experience, engineered into a product

You might wonder why LORENTZ made certain choices when designing the S1-700. We have been designing and manufacturing solar pumps for 30 years. Solar pumps need to be designed differently to other electric pumps, they must operate with varying power conditions and are usually installed in hot, wet, dusty, sunny, exposed, sometimes cold places, and off grid. Here are some questions that we get asked.

Why use DC brushless (BLDC) motors?

Solar power varies through the day. The 8 pole brushless motor that is used in S1-700 pumps is super efficient, irrespective of power or speed. The result is 2-3 times more water than competitor products for a given input power. The motor design is internally water lubricated, has long life bearings, no brushes to wear or sensors to fail, all to maximize reliability and lifetime.

Why submersible pumps and not surface pumps?

We chose a submersible design for flexibility and for use in the widest range of applications. Submersible pumps have some benefits over surface pumps that make them much easier to use. The S1-700 can be used in a river, stream, pond, tank or a well / borehole. There is no need to prime the pump, just drop it in the water. There is no need to consider "suction limits" with a submersible pump. There is also no need for a suction hose and a discharge hose, just one pipe. The submersible pump is small and light weight allowing it to be easily transported.

Why a centrifugal pump?

Centrifugal pumps are widely used across various industries and applications, and are known for their efficiency and reliability. They excel at moving large volumes of water efficiently, making them ideal for applications such as irrigation, water supply and transfer with high flow demands. Furthermore, their stainless steel construction with polymer impellers provides corrosion resistance and long-lasting durability.

Why pre-plugged?

One of the biggest barriers to installing solar pumps is wiring. The S1-700 is "plug and play", all wiring is done using weatherproof plugs. The plugs are unique so there is no risk of wrong connections.

Why have an app?

You don't need to use the LORENTZ S-Connect app with S1-700 but it opens up some extra features and functions. You can for example set timers of when you want the pump to run, set a daily water amount, configure sensors or just see performance data. The LORENTZ S-Connect app also assists with troubleshooting.

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 S product range is specially designed to bring solar pumping to the widest audience. LORENTZ S products take the experience, quality, reliability and efficiency of LORENTZ world leading solar pumps and simplifies them for self installation.
Solar water pumping, made simple.

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