

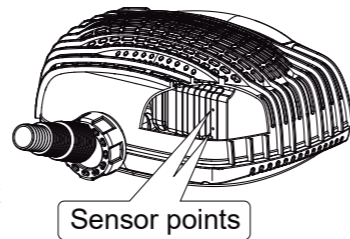


# SOLAR PUMP KIT USER'S MANUAL

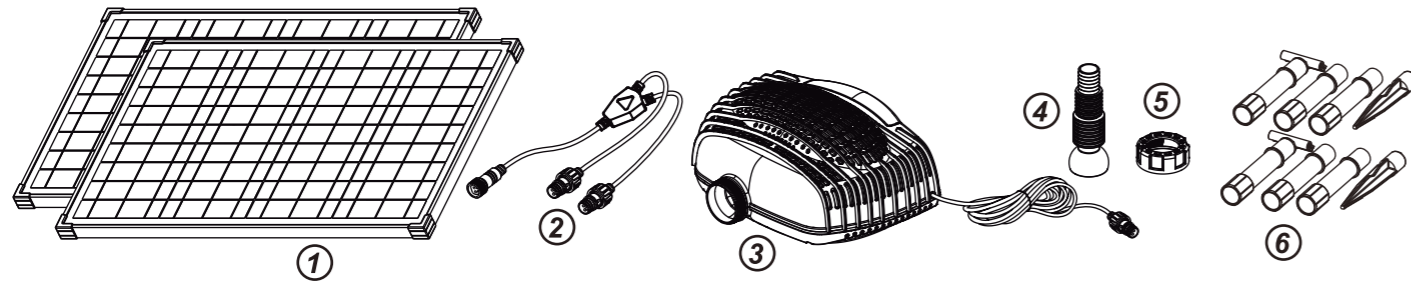
Designed for fountain  
Item No.: Solar 3500

## 1. OVERVIEW

- 1) The solar water pump is designed to pump water for waterfall, water feature and pond water filtration, and is powered by solar energy.
- 2) In order to make full use of solar energy, the solar panel needs to be placed in the sunlight with its solar cells facing the sun as much as possible.
- 3) The pump operates at its full performance when the solar panel generates more power than it demands, the output power of the solar panel depends on sunlight intensity and the incident angle at which sunlight strikes the panel surface.
- 4) The pump has the built-in function of dry-run protection. The dry-run protection function is provided by two sensor points on one side of the pump body (not visible from outside). The pump works if both of the points are submerged in water. If either or both points emerge out of water, the pump stops working.
- 5) The latest DC brushless motor technology such as locked rotor protection and overheat protection is introduced in the pump design and manufacturing, so that the pump has high efficiency and long service life.



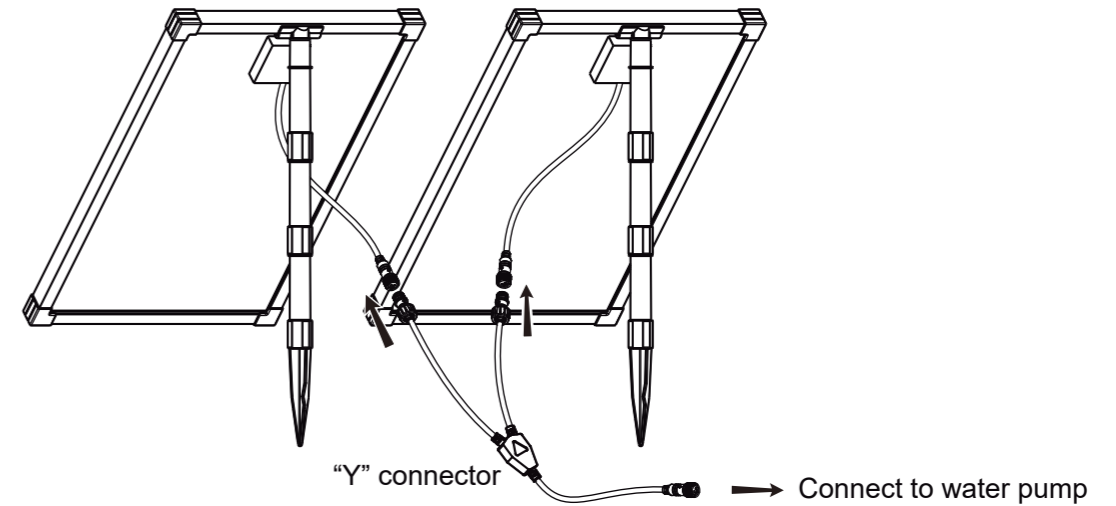
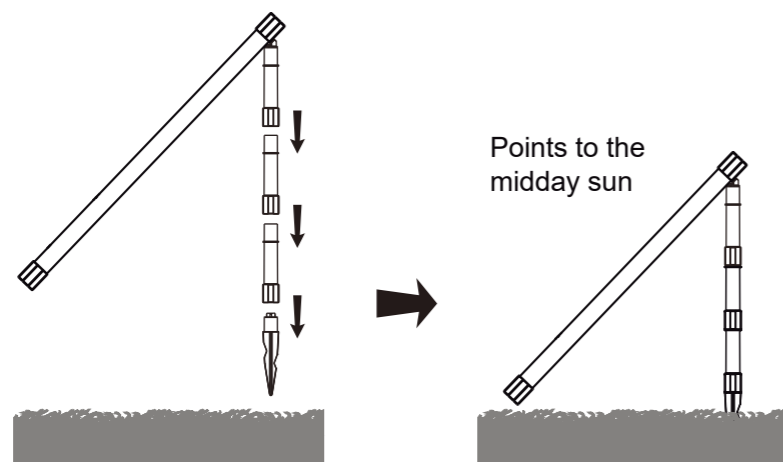
## 2. COMPONENTS



- 1) Solar panel 2) "Y" connector 3) Pump 4) Connection outlet 5) Gland nut 6) Ground spike

## 3. ASSEMBLING

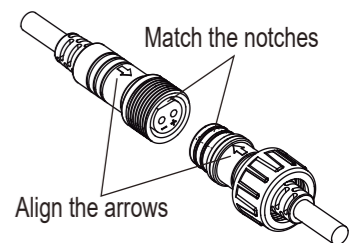
- 1) Unpack all components carefully.
- 2) To install the solar panel on the ground, find a sunny place that is shadow-free all day long and install the solar panel by the ground spike.



- 3) Connect the two solar panels through the "Y" connector, as shown in the figure above, and then tighten the protection screw.
- 4) Completely unroll the power cable on the water pump. Electrically connect the pump to the solar panel, and tighten the screw for protection.
- 5) Attach the hose onto the outlet of the hose connector. The hose connector is suitable for various hose diameters (inside diameter 25, 32 or 38 mm).
- 6) Mount the hose connector to the pump outlet by means of the enclosed gland nut. Via the ball joint, the angle of the hose connector may be adjusted under water when necessary.
- 7) Completely immerse the stream pump into the water.
- 8) The solar pump is now ready to operate.

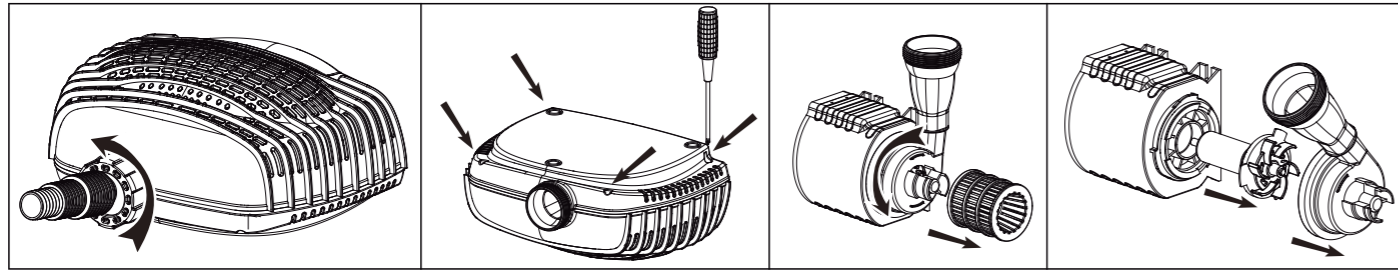
## 4. CAUTIONS

- 1) Do not connect the pump to any AC voltage power directly; it's ONLY for DC voltage power.
- 2) Operate the pump in water only (never above 40 °C), especially keep it away from flammable liquids.
- 3) Any altering of the product itself or changing of the components voids warranty.
- 4) The pump is dry run protected. The pump will automatically stop when there is no enough water.
- 5) All the cable connectors are protected against reverse polarity as shown in the right figure. Don't insert the plug with reverse polarity by using unnecessary force.
- 6) When water starts to freeze in winter, take the pump out of water and store it in a frost-free room. The water frozen may cause damage to the plastic parts.



## 5. CLEANING AND MAINTENANCE

It is recommended to clean the pump every 3 months or less. Please note that the pump may become blocked with debris between cleaning intervals, so it is important to check and clean the pump regularly to avoid damaging the pump. The warranty will be void if proper and regular maintenance is not performed.



If the pump starts losing power or stops working after operating for a certain time, please clean the pump following the steps below (See the above figures for demonstration):

- 1) Electrically disconnect the pump.
- 2) Loosen the glant nut, and take off the outlet.
- 3) Open the pump case by unscrewing the four screws, and pick out the pump body.
- 4) Pull out the inner filter grid, turn the impeller cover counterclockwise to the end and then carefully pull the impeller cover apart from the pump.
- 5) Remove the impeller unit from the pump.
- 6) Wash every part to clean the debris.
- 7) Assemble the pump in reverse sequence.
- 8) Electrically connect the pump.

**\*Clean the surface of the solar panel when necessary to keep it working at full performance.**

## 6. TROUBLE SHOOTING

\*Pump does not operate even though the solar panel is in full sunlight.

- 1) No or bad connection to the solar panel—check and reconfirm the connection to the solar panel.
- 2) Impeller is blocked—clean the pump as described in “**CLEANING AND MAINTENANCE**”.

\*Pump does operate but there is no water running through the tubes: Clear the tubes, filter and pump filter housing to make sure they are through completely.

## 7. TECHNICAL DATA AND PUMP CURVE

Operating voltage	18 V
Power of solar panel	70 W (35W X 2)
Max. pump power	32 W
Max. water lift height	3.1 M (10.2 FT)
Max. flow rate	3500 L/H (925 GPH)
Cable length	5 M (16.4 FT)

