

# Instruction manual

## Solar pond pump set "Fontana"



### Customer support:

If you have problems or questions regarding this product, simply contact us!  
**Monday to Friday 9 am to 12 noon and 1 pm to 4 pm.**  
By phone: +49 9605-92206-0  
By e-mail for ordering spare parts: [ersatzteil@esotec.de](mailto:ersatzteil@esotec.de)  
By e-mail for questions about the product: [technik@esotec.de](mailto:technik@esotec.de)  
Product: Manufacturer Item No.: 101714

These instructions relate **ONLY** to this product and contain important information for using the product for the first time. Please keep these instructions for later reference and should always accompany the product in the event of transference to a new user.

## 1. Introduction

Dear Customer, thank you for purchasing the solar pump kit. With this solar pump kit you purchased a product manufactured according to the current state of technology.

**CE** This product fulfils all requirements of the valid European and national regulations. The conformity was proved. The relevant declarations and documentation are deposited with the manufacturer.

To maintain this state and guarantee a safe operation, you as the user will have to follow this operating manual!

## 2. Safety Instructions



- In case of damages caused by not following this operating manual, the warranty rights will expire! We exclude liability for any consequential damages!
- We exclude liability for property or personal damages caused by inappropriate handling or not following the safety instructions.
- In these cases any guarantee rights will expire.

Due to safety and admission reasons (CE) it is not allowed to arbitrarily reconstruct and/or change the solar pump kit.

Therefore, please keep to the operating manual.

The accident prevention rules of the association of the industrial trade cooperative association for electric plants and working material are to be considered in industrial environments

## 3. Appropriate Use

- The pumping system is designed for the outdoor use in garden ponds.
- **Direct solar radiation is required for the correct function.**
- The pumping system is characterized by its easy assembly. Tools are not required for the assembly.
- The pump must not be used for the raising of drinking water.
- The performance may be adjusted via a controller on the pump.
- In order to safely interrupt the pumping it is required to interrupt the cable connection between solar module and pump.

## 4. Assembly and Initiation

The pumping system consists of the following parts:

1 piece solar module, 1 piece submerged pump in the plastic housing with a 5 m connecting cable, 4 pipes and 4 water nozzles.

1. Completely unroll the connecting cable on the pump.
2. Attach the telescopic ascending pipe onto the pump and then attach one of the desired sprinklers onto the ascending pipe.
3. Put the pump in the pond on some stones. Avoid a location directly on the ground of the pond because a lot of dirt is here sucked in by the pump which will then be polluted very fast.
4. Now connect the plug of the pump with the socket of the solar module.
5. Position the solar module in a sunny, shadow-free place facing south.

**Attention:** Risk of injury! A broken module may not be repaired and has to be disposed of environmentally sound.

**Note:** For further assembly instructions, please see the instruction of the water pump.

## 5. Service and Maintenance

In order to preserve the performance of the pump, it is required to wash out the pump and its parts with warm water depending on the pollution of the water.

For directions for the service and maintenance of the pump storage, please see the instruction of the pump storage.

Occasionally wipe the solar module clean with a soft and slightly moistened cloth.

**Note:** Before carrying out operations on the pump, interrupt the plug connection between pump and solar module in order to avoid any unintentional starting during the operations.

## 6. Technical Data

### Solar module

- Nominal power: 5,5 Wp
- Nominal voltage: 17,2 V
- Nominal current: 318 mA
- Open-circuit voltage: 20,6 V
- Short-circuit current: 350 mA
- Protection system: IP 64
- Protection class: III
- Temperature range: -30°C to +75°C

### Water pump:

- Max. delivery height: ap. 1,2 m
- Delivery rate (at 8 VDC): ap. 350 l/h
- Protection system: IP 68
- Protection class: III
- Temperature range: +4 to +40°C

### Note: Protect the pump from frost!

In cold winter months, it is required to take the pump out of the water and store it in a warm place. The solar module may be left outside during the winter.

## 7. Safety Instructions:

**DANGER for children!** Keep children away from swallowable small parts (ascending pipe and sprinklers) and the packaging material. Danger of suffocation!

**WARNING:** risk of stumbling! Lay the connecting cable so that it will not become a trip hazard!

**CAUTION Material damage!** When setting up the solar module without module bracket, please pay attention to an adequate stability. The solar module may be damaged in case of tipping or in case of an impact of a foreign object.

### Disposal:

Dear customer, please cooperate in avoiding waste. When you intend to dispose of the product in future, please consider that it contains valuable raw materials suited for recycling.

Therefore, do not dispose it of with domestic waste but bring it to a collection point for the recycling of waste electrical and electronic equipment.

Thank you very much for your cooperation!



### Manufacturer / Importer

**esotec GmbH** - Gewerbegebiet Weberschlag 9 - D-92729 Weiherhammer  
Tel.-Nr: +49 9605-92206-0 - Fax.-Nr: +49 9605-92206-10 - Internet: [www.esotec.de](http://www.esotec.de)

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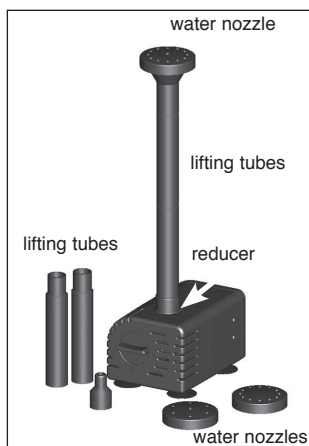
## 3. Intended use

This submersible pump is designed for pumping water in garden ponds, fountains, water dishes, etc. It can pump water through a hose connection or can be operated through attached lifting tubes with water sprinklers.

The delivery rate of the pump can be adjusted using the regulator on the front side of the pump. The water pump has no On/Off switch. As soon as the pump is connected to its power supply, it starts pumping water.

## 4. Installation and commissioning

1. Roll out the connecting cable of the pump completely.
2. Place the pump in water.
3. Connect the lifting tubes till they project out of the water surface. For this, first attach the reducer to the pump.
4. You can now choose from 3 different water nozzles or a single jet nozzle. The multiple jet nozzle attachments are always snapped onto the nozzle cup.
5. Alternatively, the pump can also be used for pumping water through a hose. For this, you just have to attach a hose to the pump's pipe.
6. Now supply power to the water pump through a solar module. Put the connector from solar module and pump together.



**Note:** The plug has reverse-polarity protection, no force should be used while inserting. The glass of the solar module is fragile.  
Caution! Risk of injury! A broken module cannot be repaired again and must be disposed off in an environmental-friendly way.

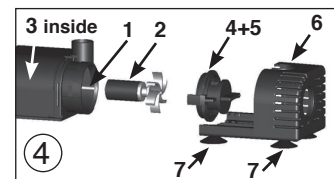
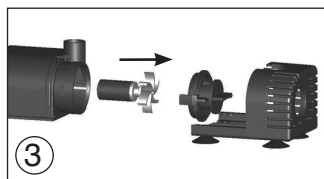
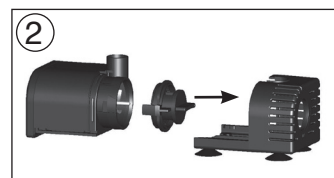
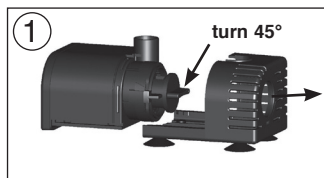
7. If the pumping capacity is too high, you can reduce the amount of water. Simply turn the regulator on the front side of the pump in clockwise direction. Please do not use force while adjusting. The adjustment range is 45°.

## 5. Care and maintenance

For optimum performance of the pump, it must be washed occasionally with warm water depending on the water contamination. To wash the pump, open the housing as follows:

**Note:** Please do not use force while dismantling or assembling the pump. The parts are very fragile and can break easily.

1. Disconnect the pump's plug.
  2. Pull the front cover of the pump forward like a slide gently (Figure 1).
  3. Turn the front cover of the pump by about 45° clockwise (Figure 1) and carefully pull the cover forward (Figure 2). Watch out for the plastic shaft and the seal while doing this.
  4. Carefully drag the impeller out of the pump (if necessary, use pliers). (Figure 3).
  5. Now clean all the parts carefully with warm water.
  6. Then plug the shaft with the impeller carefully into the hole of the pump. Ensure that the shaft is fitted firmly.
  7. Now place the cover carefully over the pump. Ensure that the seal is fitted properly.
  8. Turn the front cover again by 45 degrees counter-clockwise into the starting position.
  9. Slide the lower part of the pump completely into the pump housing.
- The pump is ready to use again.**



## 6. Malfunction

**Pump is not pumping water**

- Is the pump completely submerged in water?
- Is the pump dirty? Cleaning the pump, see Point 5.

## 7. Technical data

- Operating voltage: 17 V DC
- Degree of protection: IP 68
- Power consumption: 3,7 W - 4,5 W
- Pump lift: max. 1,2 m
- Delivery rate: max. 350 l/h
- Operating temp. range: +4 to +40°C

## 8. Spare parts (Figure 4)

- |  |                  |
|--|------------------|
| 1. White ceramic shaft:                  | Item No.: 911002 |
| 2. Pump impeller:                        | Item No.: 911003 |
| 3. Internal rubber bush:                 | Item No.: 911004 |
| 4. Front cover:                          | Item No.: 911005 |
| 5. Seal for cover:                       | Item No.: 911006 |
| 6. Sliding carriages with suction bases: | Item No.: 911007 |
| 7. Suction bases (4 pieces)              | Item No.: 911008 |
| 8. Complete nozzle set:                  | Item No.: 911009 |

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