



## Pumps for the Future

# REEFE™ SOLAR PUMP USER MANUAL

Model No.: RSF2500

### 1. OVERVIEW

- 1) The solar water pump is designed for water features and waterfalls, and is powered by a solar panel.
- 2) The solar panel needs to be placed in the sunlight with its solar cells facing the sun as much as possible, the performance of the pump depends on the sunlight intensity and the orientation of the solar panel.
- 3) The latest DC brushless motor technology is used in the pump design and manufacturing, so that the pump has high efficiency and long service life.
- 4) The pump has a 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.-see Figure 1). 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.

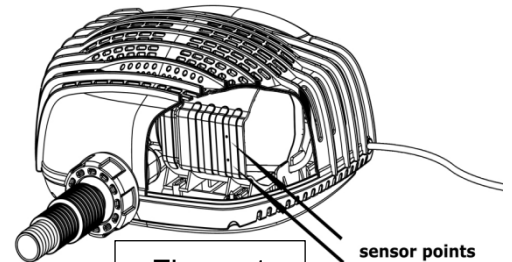


Figure 1

### 2. COMPONENTS

- 1) Solar panel with ground spike
- 2) Pump
- 3) Hose connection
- 4) Gland nut (M56 x 2.0mm thread)
- 5) Spare Impeller (Not pictured)

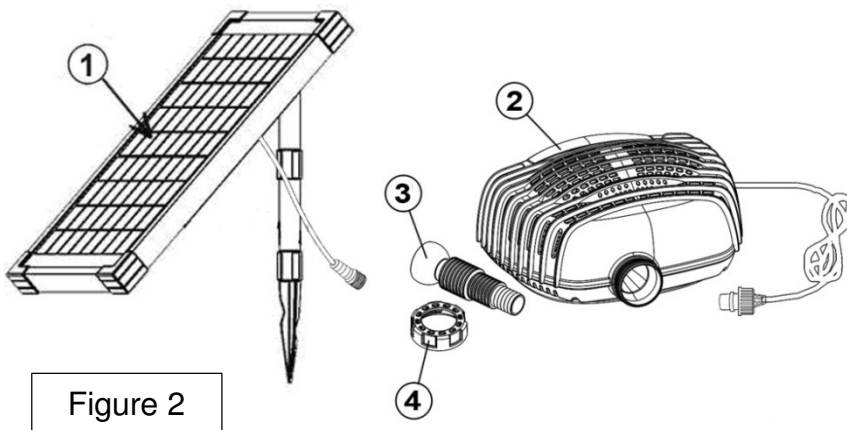


Figure 2

#### **FOUNTAIN FUNCTION**

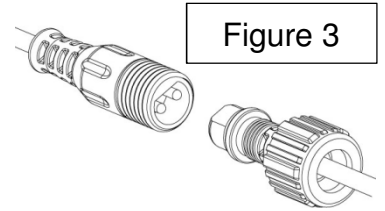
If you wish to use a fountain nozzle (not supplied) you will need to connect it using hose from the hose connection (part 3 in Figure 2) as the thread outlet on the pump is a non-standard thread (M56 x 2.0mm)

### 3. ASSEMBLING

- 1) Completely unroll the power cable.
- 2) Attach the hose onto the outlet of the hose connection. The hose connection is suitable for various hose diameters (inside diameter 25,32 or 38 mm). For fountain nozzle use see above "Fountain Function".
- 3) Mount the hose connection to the pump outlet by means of the enclosed gland nut. Via the ball joint, the angle of the hose connection may be adjusted under water as necessary.
- 4) Completely immerse the pump into the water.
- 5) Connect the pump to the solar panel, and ensure the cable connection is tightened correctly.
- 6) Install the solar panel in garden lawn or soft ground by means of the spike. Adjust the angle to face the solar panel toward the sun.
- 7) The solar pump is now ready to operate.

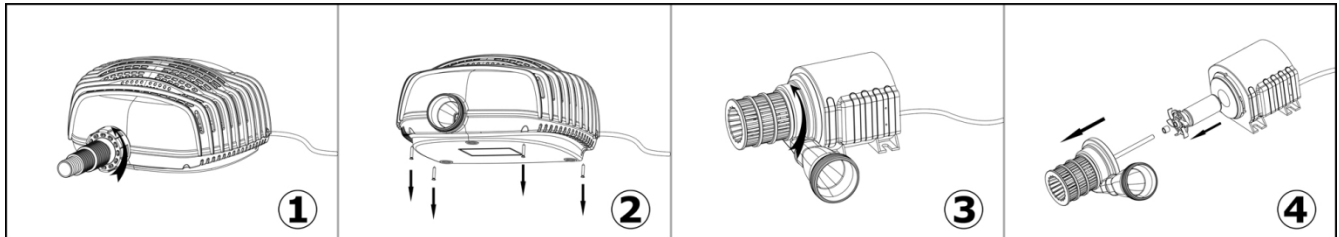
### 3. CAUTIONS

- 1) Any altering of the product itself or changing of the components voids warranty.
- 2) Do not connect the pump to any AC voltage power directly; it can ONLY operate on DC voltage power.
- 3) Operate the pump in water only (never above 40°C), especially keep it away from flammable liquids. Do not use in any hazardous areas.
- 4) All the connectors are protected against reverse polarity as shown in Figure 3. Don't insert the plug with reverse polarity by using force.
- 5) The pump is dry run protected. The pump will automatically stop when the water level is low.



### 5. CLEANING AND MAINTENANCE

Figure 4



If the pump starts losing power or stops working after operating for a certain time, please clean the inside of the pump and any debris on the filter cage.

The pump can be opened by unscrewing the four screws on the four corners of the filter housing bottom. To clean the pump, disassemble the pump according to Figure 4 and then clean all parts with water.

In the case of a build-up of lime-scale (calcium deposits) use a mild descaling solution, following the instructions provided for a "shower head"- we recommend RUBBEDIN DESCALE MAGIC – available from most Hardware's and Supermarkets.

**Be careful not to drop the ceramic shaft while cleaning the impeller as it breaks easily.**

### 6. TROUBLE SHOOTING

Pump does not operate, please check the following possible reasons:

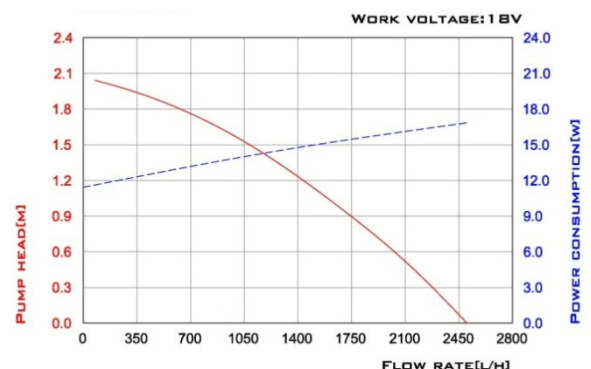
- 1) Clouds, dust or shade will cause the pump to stop.
- 2) No connection to the power supply.
- 3) Impeller is blocked—to clean the pump as described in "**CLEANING AND MAINTENANCE**".
- 4) Check the water level, ensure the pump is fully submerged in water.
- 5) If all above are ok, try the spare impeller supplied with the pump.

• **If pump does operate but there is no water running through the pipework: Clear the pipework and the filter to make sure there are no blockages.**

### 7. TECHNICAL DATA AND PUMP CURVE

• **ALL** Performance data is subject to change without notice, and is subject to the Solar Energy (Sunlight) available.

Peak Power of Solar Panel	25W
Operating voltage	18V
Maximum pump head	2.1m
Maximum flow rate	2480L/H
Cable length	5 M





**WARNING: Condition of Warranty: This pump MUST NOT be installed in any manner that if it were to leak that it would cause damage or loss to property or persons. It MUST be installed in a well-ventilated and drained area. All warranty is void if this condition is not heeded and no liability can be accepted in the case of damage or loss caused by failing to comply with this condition.**

#### **SOLAR PUMPS 24 MONTH LIMITED WARRANTY CONDITIONS**

1. Warranty covers only motor failure and manufacturing defects within a 24 month period from the original date of purchase for REEFE™ SOLAR PUMPS purchased and used in mainland Australia.
2. Faults arising due to: - Accidents, misuse, not following these instructions or power surges/spikes/brownouts will not be covered by this warranty
3. Warranty will be void if any tampering or removal of identification labels or electrical cables has occurred, or if pump is moved from the original place of installation or if any non-genuine parts have been fitted.
4. The costs of loss of livestock, damage to property, consequential losses or injury caused by the misuse or abuse or your installation of this appliance is not covered by this warranty. Also, consequential losses caused by faults or failure of this product (which are not reasonably foreseeable by RAMDEX INDUSTRIES to occur) are not covered by this warranty.
5. Faults caused by installation or improper servicing will not be covered. In addition defects stemming from insufficient maintenance are not covered.
6. Warranty is void if this pump is used for pumping anything other than fresh, clean water, or clean saltwater.
7. In the case of pump failure, you must:
  - a) Check the trouble shooting guide first.
  - b) Then call RAMDEX on 1300 726 339 and speak to the Warranty Department who will authorize repair or replacement OR you may return to the original place of purchase for replacement or refund.
8. For any warranty claim to be valid, an original proof of purchase must be supplied, or an acceptable substitute.
9. If an exact replacement is not possible the closest equivalent product will be supplied at Ramdex Industries discretion.
10. This product is guaranteed as fit for the purpose of use as stated on the outer packaging, and NO other use.
11. Condition of Warranty: This pump is not to be used as your sole water supply or for drinking water or for fire-fighting purposes.
12. Condition of Warranty: This pump MUST NOT be installed in any manner that if it were to leak that it would cause damage or loss to property or persons. It MUST be installed in a well-ventilated and drained area. All warranty is void if this condition is not heeded and no liability can be accepted in the case of damage or loss caused by failing to comply with this condition.
13. This product is not intended for use by children or infirm persons. It is your responsibility to ensure, by way of supervision or isolation, that children or other infirm or irresponsible persons are not harmed by this product.
14. All installations must comply with the local Council, Shire, electrical and plumbing regulations in your area.
15. Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. If you (the purchaser) do not fall within the meaning of 'consumer' in the Australian Consumer Law some or all of the provisions of the Australian Consumer Law will not apply to you.

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**IMPORTANT NOTE:** DO NOT use for anything other than clean, fresh or saltwater.

**NOTE:**

1. Save Power and the Environment refers to the fact that this product does not require mains power to operate. Note that this product has not been independently tested to verify the savings.
2. Performance figures are for the maximum performance in full mid-day summer sunlight and will vary according to the Solar Energy available; the pump may not operate at all when the Sun is obscured by clouds or dust. This Solar Pump does not operate during the night, except for Battery Back-up versions.