



PUMPS AUSTRALIA

BETTER • FASTER • EASIER



SOLAR/DC POWERED **VORTEX SUMP PUMP**

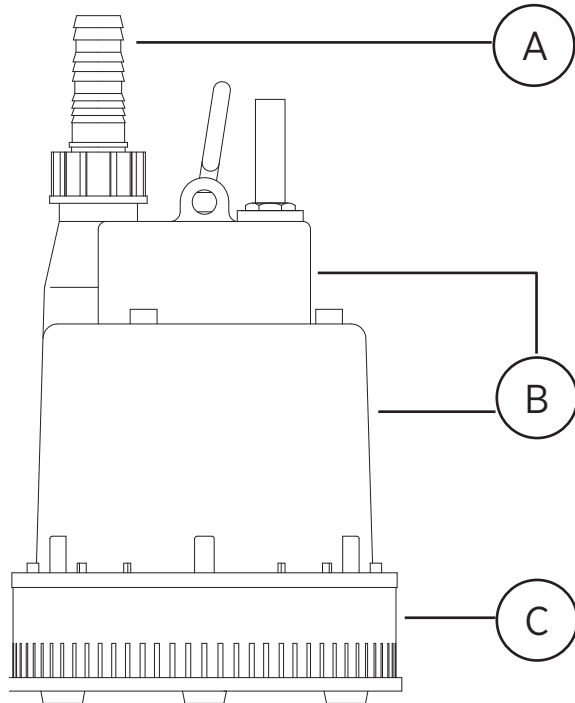
EXPLODED VIEW &
INSTRUCTION MANUAL

MODEL: RSE24V
CODE: 21026

COMPONENTS & MATERIALS

| POSITION | COMPONENT | MATERIAL |
|----------|-----------|----------|
|----------|-----------|----------|

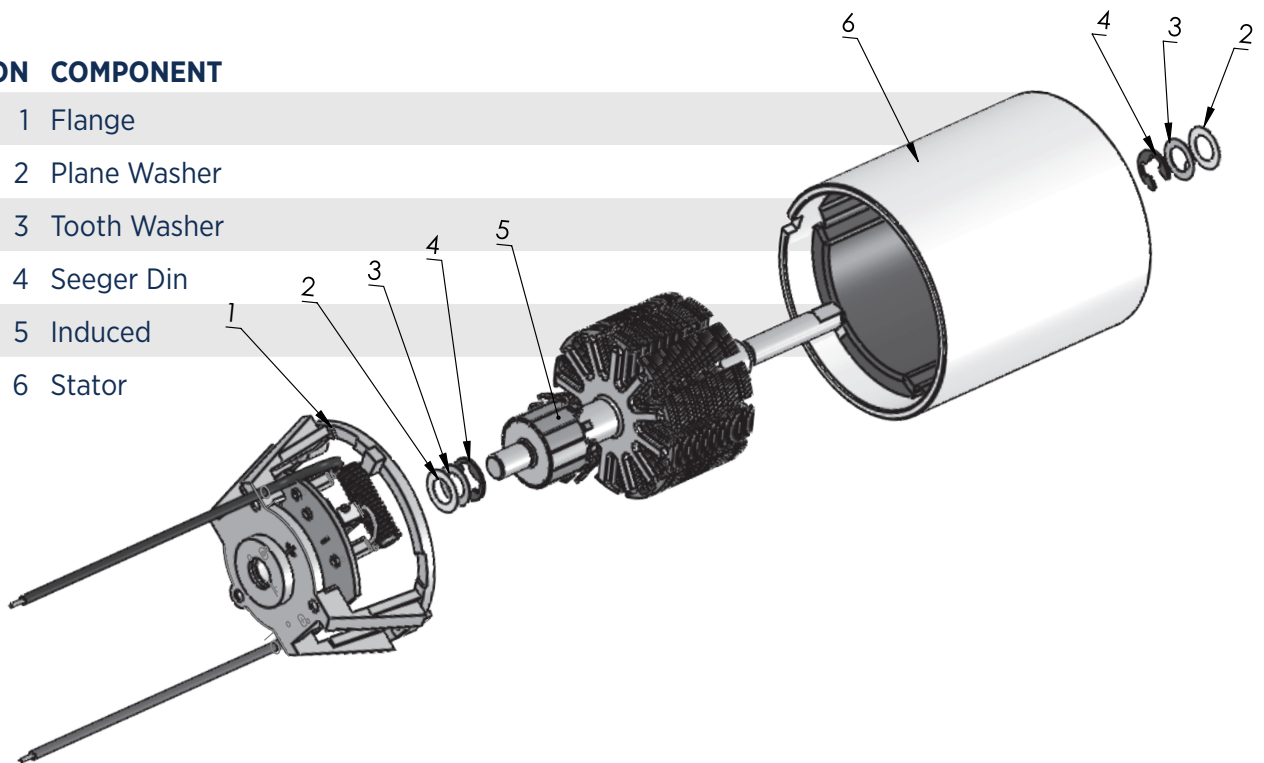
| | | |
|---|-----------|---------|
| A | Discharge | Polymer |
| B | Pump Body | Polymer |
| C | Pump Base | Polymer |



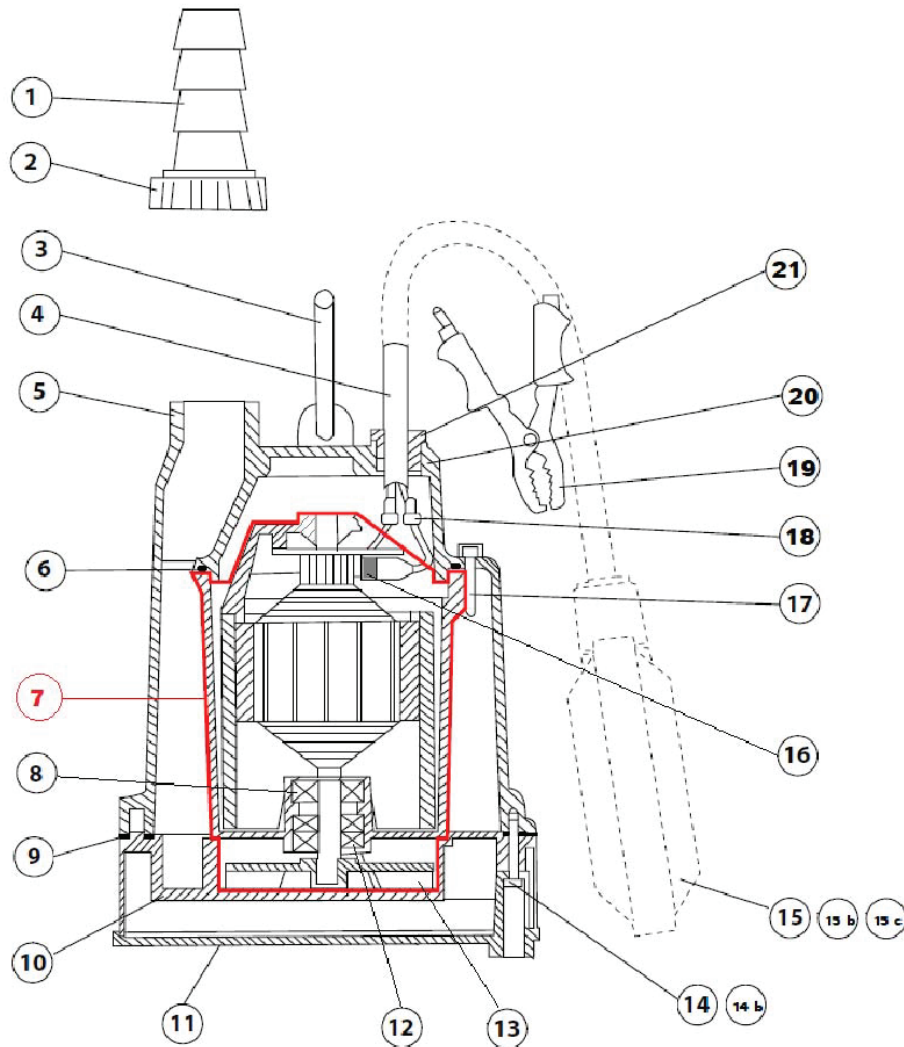
SOLAR SUMP PUMP RSE24V

| POSITION | COMPONENT |
|----------|-----------|
|----------|-----------|

| | |
|---|--------------|
| 1 | Flange |
| 2 | Plane Washer |
| 3 | Tooth Washer |
| 4 | Seeger Din |
| 5 | Induced |
| 6 | Stator |



PARTS LIST & EXPLODED VIEW



SOLAR SUMP PUMP RSE24V

POSITION COMPONENT

1 Plastic Hose

2 Ring

3 Handle

4 Sleeve Socket

5 External Cover

6 O-Ring

7 Motor and Impeller

8 Ball Bearing

9 Flat Seal

10 Body Pump

11 Suction Grid

POSITION COMPONENT

14 Screw

14b Screw

15 Float Switch

15c Vertical Float Switch

16 Carbon

17 Screw

18 Connector

19 Cable with Pliers

20 Washer

21 Cable Gland

INSTRUCTION | INSTALLATION MANUAL

Dear Client,

Congratulations on your purchase of this REEFE® pump product. These pumps are developed and manufactured using the latest in technology and advanced electrical and motor parts.

Please check the following points upon receipt of your pump:

Is the pump exactly what you ordered? Please check the nameplate.

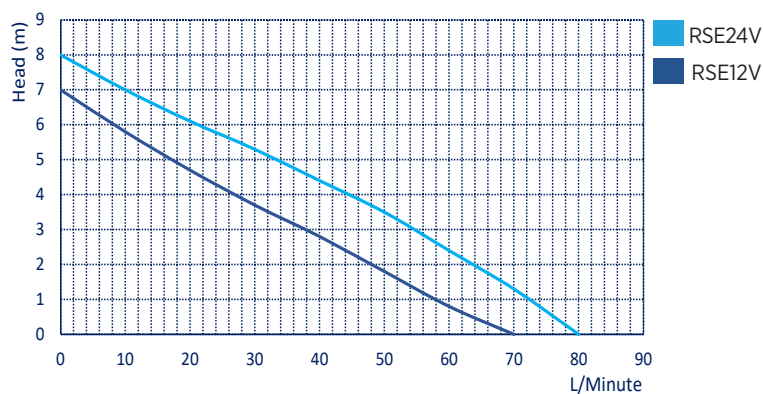
Is the power supply correct? (This is a low voltage 12V/24V product)

Has any damage occurred during shipment? Are any bolts or nuts loose?

Take the time to read the instructions carefully before using this appliance.

We strongly recommend that you keep this instruction manual in a safe place for future reference.

| CODE | MODEL | POWER 12V | | VOLTAGE | | RATED | | MAXIMUM | | SOLIDS HANDLING | CABLE LENGTH | WEIGHT (KG) | SIZE L X W (MM) |
|-------|--------|-----------|-----|---------|-------|--------------|----------|--------------|----------|-----------------|--------------|-------------|-----------------|
| | | AMPS | W | V-MIN | V-MAX | FLOW (L/MIN) | HEAD (M) | FLOW (L/MIN) | HEAD (M) | | | | |
| 21019 | RSE12V | 15 | 180 | 12 | 12 | 35 | 3.2 | 70 | 7 | 2mm | 5 | 3.6 | 282x164 |
| 21026 | RSE24V | 8.5 | 220 | 24 | 24 | 40 | 4.5 | 80 | 8 | 2mm | 5 | 3.6 | 280X164 |



| TYPE | Power | Input Current |
|--------------|-------|---------------|
| Single Phase | Watts | 12V/24V |
| RSE12V | 180 | 15A |
| RSE24V | 220 | 8.5A |

Marks and Meaning:



DANGER

Keep the pump equipment out of the reach of children!

Warns that the failure to follow the directions given could cause serious risk to individuals or objects.



WARNING

This sign warns the operator that the failure to follow an instruction may damage the pump and/or the system

Limitation:

This pump is suitable to pump rain water and can be used both for permanent and temporary installation.

The pump can also be used for sump pits to pump dirty water containing suspended solid particles 2mm diameter.



The pump must not be used for inflammable, corrosive, explosive or dangerous liquids. Ensure that the pump never runs without liquids.

Installation:

Do not work on pump until power is unplugged.

Do not cut off ground pin or use an adapter fitting.

Do not use an extension cord.

Before you connect the wire, be sure you have purchased correct Battery in correct charge AH type. Ensure the DC power is switched to OFF position prior to connect the two input wire Black and White color. Never touch the pump when it is connected to electrical power.

1. Before installing or servicing this pump, be certain pump power source is disconnected.(by switch or manual switch outside.)
2. Installation and electrical wiring must adhere to state and local codes and must be completed before running pump.
Check appropriate community agencies, or contact local electrical and pump professionals.
3. Voltage of power supply must match the voltage of the pump, if you use polar cell you must double check the DC power is enough..
4. Before installing pump, clear sump basin of any water,debris,or sediment.
Warning: Sump basin must be vented in accordance with local plumbing codes. REEFE Sump pumps are not designed for and CANNOT be installed in locations classified as hazardous.
5. The following may cause severe damage to pump and will void warranty:
 - (a) Using an extension cord too long.
 - (b) Cutting off the ground pin or using an adapter fitting.
 - (c) Working on pump or switch while plugged in.
 - (d) Removing motor housing, unscrewing impeller, or otherwise removing impeller seal
 - (e) Running the pump continuously.
 - (f) Pumping chemicals or corrosive liquids.
 - (g) Pumping gasoline or other flammable liquids.
 - (h) Piping, plastic PVC pipe could install in the outlet piping line, but drain hose, galvanized steel or copper pipe may be used if desired. All piping must be clean and free of all foreign matter to prevent clogging.
Use thread compound on all threaded joints unless specified otherwise. Be sure to seal the thread connection with tape seal when you using the pipe fitting to connect the flange.
 - (i) Pump inadequate suspension liquids in which the solid partical is larger than the strainer's holes.

Electrical Wire Connection:

Be sure the power of the pump is same as the shown on the nameplate.

Connect the correct two wires, black color wire connects to positive [+], white color wire connects to negative [-]

to the 24 voltage battery. It is not necessary to a use longer cable to connect the battery, the longer wire you use, the less DC power in.

Before using the pump, always inspect it visually (especially power cable and plug).

Do not use the pump if the power line is damaged.

Power of pump (watts) x 1.3 ~ 1.6 = power rating of solar PV panel(s) in watts, For example: A 300 watt pump needs a minimum of 390 watts of PV panels to drive it:

300 watt pump x 1.3 = 390 watt PV panel

•You may need combinations of panels, to suit the RSE12V/RSE24V, 180/220 Watt pump

•When you have panels in parallel, add the current of the panels and the wattage.

Note: If connecting in parallel you will need Schottky Diodes in series with each panel.

•When using panels in series add the voltage and the wattage.

For example: 1) 3 x 12 volt 100 watt panels in parallel become a 12 volt 300 watt system

2) 2 x 12 volt 100 watt panels in series become a 24 volt 200 watt system

So, we recommend you install 4 x 12 volt 100watt panels , 2 panels in series then, add another 2 panels set in paralle, and it will become 400 watt.

[Note: Your cell panel supplier will be able to help you with panel selection]

The controller will already be matched to the pump by your supplier if end user wants to add solar system for the power input. Battery selection, if you want to pump when there is not enough sun.

If you want to add batteries please note that you will need an additional solar charge controller (not supplied in the kit) and you will need to double the number of PV panels. The extra PV panels are required to charge the batteries while the pump is pumping.

The cheapest option is to:

a) try to fill an elevated header tank or

b) if you have no elevation locate the tank near a utility power supply so you can pump water from the tank using a mains powered pump

If the pump is damaged, have it inspected by the specialized assistance service only. Make sure that electric connections are protected from inundation.

Protect the plug and the power cable from heat, oil or sharp edges.

The power cable must be replaced by qualified personnel only.

Overload protection:

This pump series have a built in thermal protection switch. The pump stops if an overload condition occurs. The motor restarts automatically after it has cooled down.

24 Month Limited Warranty Conditions

1. FOR CONSUMERS: 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.
2. Warranty covers only motor failure and manufacturing defects for pumps used for domestic or commercial use, within a 24 month period from the original date of purchase for REEFE™ pumps purchased and used in mainland Australia. No warranty applies for pump used for hire or on building sites.
3. Faults arising due to: - Accidents, misuse, not following these instructions or power surges/spikes/brownouts will not be covered by this warranty
4. Warranty will be void if any tampering or removal of identification labels or electrical cables has occurred, or if any non-genuine parts have been fitted.
5. The costs of loss of livestock, damage to property, consequential losses or injury caused by misuse, abuse or not following these instructions is not covered by this warranty.
6. Faults caused by installation or improper servicing will not be covered. In addition defects stemming from improper maintenance are not covered.
7. Warranty is void if this pump is used for pumping anything other than fresh, clean water, or screened greywater.
8. In the case of pump failure, you:
 - 1) Check the trouble shooting guide first.
 - 2) Then call Ascento on 1800 807 604 and speak to the Warranty Department who will authorise repair or replacement OR return to the original place of purchase for replacement or refund.
9. For any warranty claim to be valid, an original proof of purchase must be supplied, or an acceptable substitute.
10. If an exact replacement is not possible the closest equivalent product will be supplied at Ramdex Industries discretion.
11. This product is guaranteed as fit for the purpose of use as stated in the instruction manual, and NO other use.

| TROUBLESHOOTING CHECKLIST (CAUTION: SHUT OFF POWER TO PUMP) | |
|---|--|
| PROBLEMS | POSSIBLE CAUSES |
| Pump does not run and hums | <ul style="list-style-type: none">*Power input line get some problem. check battery power.*Water level in sump has not reached turn-on level as indicated*Pump cord is not making contact in receptacle.*Float is stuck. It should operate freely in basin.*If all of the above are OK, and then the motor could be operate. |
| Pump runs but does not deliver water. | <ul style="list-style-type: none">*Check valve is installed backwards. Arrow on valve should point in direction of flow.*Discharge shut-off valve (if used) may be closed.*Impeller or volute openings are fully or partially clogged. Remove pump and clean.*Pump is air-locked. Start and stop several times by plugging and unplugging cord. Check for clogged vent hole in pump case.*Inlet holes in pump base are clogged. Remove pump and clean the openings.*Vertical pumping distance is too high. Reduce distance or change the discharge fittings of the pump, sometimes, need to double check the power in line. |
| Pump runs and pumps out sump, but does not stop. | <ul style="list-style-type: none">*Float is stuck in up position if there is float switch. Be sure float operates freely in basin.*Defective float switch, if there is a float switch. Replace with float switch.*Defective vertical switch. Replace with vertical switch. |
| Pump runs but delivers only a small amount of water. | <ul style="list-style-type: none">*Pump is air-locked. Start and stop several times by plugging and unplugging cord. Check for clogged vent hole in pump casing.*Vertical pumping distance is too high. Reduce distance or change the discharge fitting of the pump. Inlet holes in pump base are clogged. Remove pump and clean the strainer and openings.*Impeller or volute openings are fully or partially clogged. Remove pump and clean.*Pump impeller is partially clogged with tar or paint, causing motor to run slow and overload. Remove pump and clean. |
| Motor runs for a short time, then stops. | <ul style="list-style-type: none">*Inlet holes in pump base are clogged. Remove pump and clean the openings.*Pump impeller is partially clogged with tar or paint, causing motor to run slow and overload. Remove pump and clean.*Motor stator may be defective.*Impeller or volute openings are fully or partially clogged. Remove pump and clean also clean the strainer if you had installed. |

ELECTRICAL PRECAUTIONS:

Before servicing a pump, always shut off the main power DC pump and then unplug the pump.
Although this is a DC power pump without grounding problem, it will not cause shock to fish or human beings.
Always unplug the power supply, when inspecting the pump condition, or Contact your local electric company or a qualified licensed electrician to disconnect electrical service prior to pump removal.