Emmvee Spowdi

SWITCH TO A GREENER WATER PUMP!

POWERED BY THE MOST ADVANCED SOLAR PANELS IN INDIA.

Emmvee Spowdi is a sustainable solar solutions manufacturer born from a common ideology shared by two leading companies in the solar industry. The combined effort is all set to revolutionise the agricultural industry. We aim to deliver ecologically sound products that uplift the lives of Indian farmers and also restore groundwater levels.

OUR VISION

We aim to provide a practical solution to the water management problem and educate the farmers on creating a sustainable future. Also, we at Emmvee Spowdi strive to become a global leader in manufacturing highly qualitative, innovative and cost-effective products that shall continue to benefit the farmers as well as the environment.

OUR MISSION

Creating awareness while changing the conservative way of thinking to take the society forward and build a solid long-term solution. We also strive to keep an open mind to endorse new-age technology and make improvements in our product range in a way that is intact with our values and care for our environment, community, customers and our stakeholders.

Worried about decreasing groundwater levels?

The usage of traditional water pumps for farming can pose a major threat to the available groundwater. The oversized capacity of the pumps draws an excessive amount of water from the ground over a short period. Moreover, more than 80% of the water is wasted before it even reaches the crops while using these conventional water pumps, on the other hand, this leaves no time for the groundwater level to recover before it is used again. Spowdi was created, bearing in mind the long-term problems faced by small farmers in the country. It ensures a high yield with less water used for irrigation and saves up to 4 hours of manual labour that can be invested in other important things. Emmvee Spowdi is powered by solar panels and requires no technical experience to operate it. It provides only the optimal level of water required for the entire farm, which in turn helps in maintaining a high groundwater level all round the year.

SYSTEM COMPONENTS

150W FOLDABLE SOLAR PANEL

PRESSURE VESSEL WITH T-CONNECTOR

POWER MANAGEMENT BOX (PMB)

PUMP UNIT

EXTRA MEMBRANE

SPOWDI TOOL

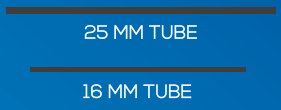
INSTALLATION KIT

To install the system you will need tubes, pipes, and connectors. You will find everything you need for an optimal installation at your local Spowdi dealer.

NOTE: Make sure you always use equipment recommended by your local Spowdi dealer.

25 MM 16 MM 8 MM STRAIGHT CONNECTOR

8 MM HOSE



25 MM TUBE

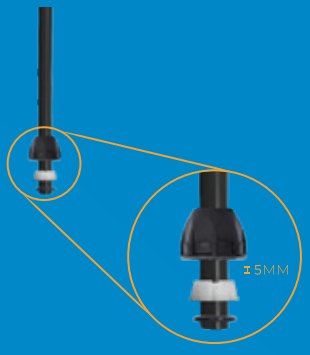
16 MM TUBE

INSTALLATION

1. CONNECT THE 25 MM TUBE TO THE PUMP UNIT AND T-CONNECTOR

A: Remove the cap from the T-connector and the pump unit

B: Take out the black and white plastic parts and the packaging from the T-connector and pump unit



***C:** Put the cap, black and white plastic parts, and the packing in the 25 mm tube.

****D:** Press the 25 mm tube with the plastic parts and packing down 2 cm into the pump unit. Screw the cap clockwise to secure the tube to the pump unit.

E: Fix the tube into the T-connector

***NOTE:** The black packing should be 5 mm from the end of the water tube

****NOTE:** Press down into the pump unit

2. CONNECT THE 16 MM TUBE TO THE PUMP UNIT

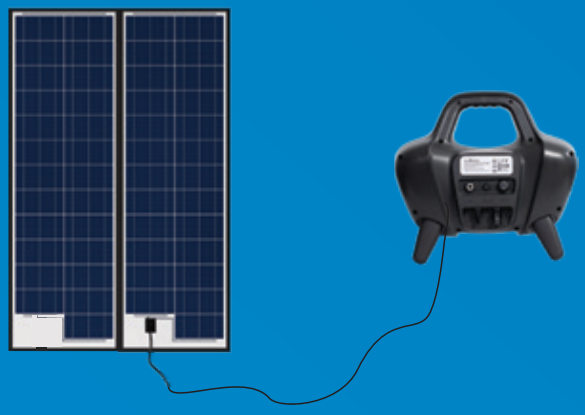
NOTE: To remove the 16 mm tube and the hose, press and hold the white plastic part and release the tube/hose by pulling them gently.

3. CONNECT THE 8 MM HOSE TO THE PUMP UNIT AND PMB

NOTE: Press the hose into the connector. To release: press and hold the white ring and gently pull the hose out

4. CONNECT A 25 MM TUBE (WATER OUTLET) TO THE T-CONNECTOR

5. CONNECT THE SOLAR PANEL TO THE BACK OF THE PMB



A: Make sure the solar panel is in the right angle to the Sun

B: Place the PMB in the shade of the solar panel. Always avoid direct sunshine to the PMB

NOTE: System will perform at maximum capacity when Sun's radiation is 750 watt / m^2 or more

6. STARTING THE SYSTEM

A: Set the main switch on the back of the PMB to "ON"

B: Press and hold the power button on the front for three seconds. If the solar panel provides sufficient power or the battery is full, the system will start

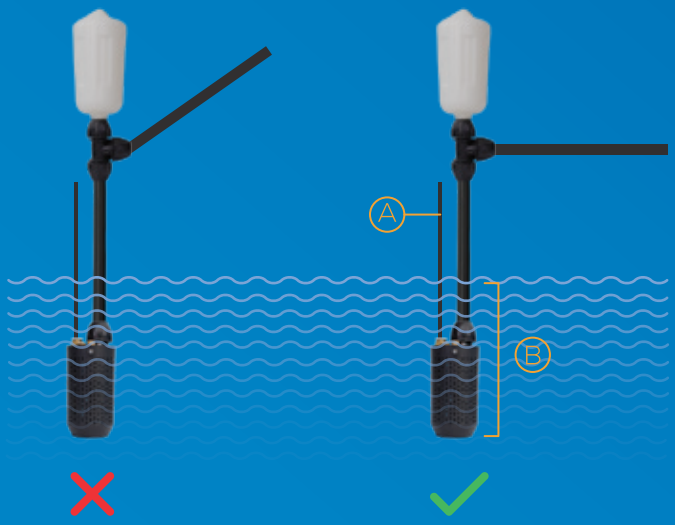
When sun radiation is
ABOVE 750 watt/m^2
system performance is
100%

When sun radiation is
BELOW 750 watt/m2
system will operate on the battery until it is empty, then it will
STOP

NOTE: When the Sun's radiation is at the minimum 750 watt / m^2 again, the system will start automatically and charge the battery during operation.

RECOMMENDATIONS

NOTE: Pressure vessel should always be the highest point of the system



A: The 16 mm tube has to be long enough to be above the water surface

B: For best performance, place the pump body 30 cm under the water surface

OPTIMIZING THE WATER FLOW

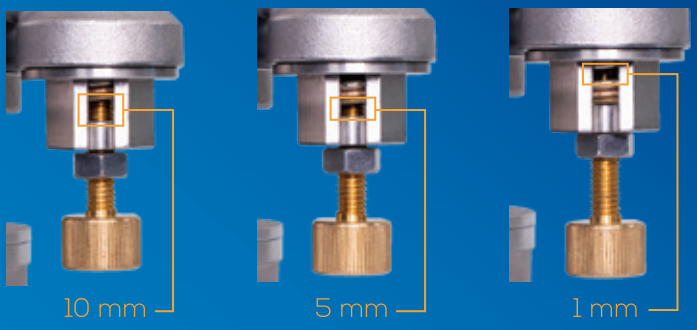
If installed with a low head (5 m or less), the air regulator inside the filter can might need to be adjusted

A: Remove the filter can by removing the two screws at the top

B: Pull the filter can down

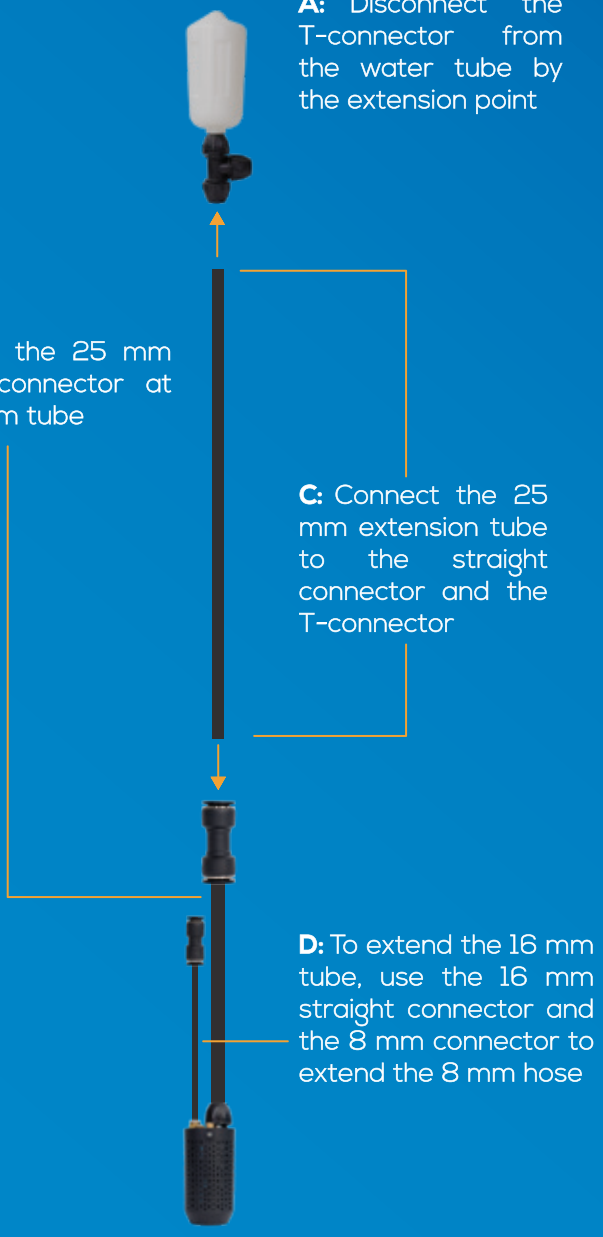
C: Reduce the air pressure by screwing the air regulator screw counter-clockwise until there is no resistance from the spring inside the air regulator.

PUMP HEAD SETTINGS



EXTENDING THE SYSTEM

Depending on the type of installation you might need tubes, pipes, and connectors. You will find the right equipment for an optimal installation at your local Spowdi dealer.



A: Disconnect the T-connector from the water tube by the extension point

B: Mount the 25 mm straight connector at the 25 mm tube

C: Connect the 25 mm extension tube to the straight connector and the T-connector

D: To extend the 16 mm tube, use the 16 mm straight connector and the 8 mm connector to extend the 8 mm hose

NOTE: Its possible to extend the water tube between the pump unit and the T-connector up to 10 meters. Only extend using a water tube recommended by Spowdi.

SYSTEM KNOWLEDGE

CHECKLIST

- PRESSURE VESSEL SHOULD ALWAYS BE THE **HIGHEST POINT** OF THE SYSTEM
- DISTANCE BETWEEN WATER SURFACE AND HIGHEST POINT (PRESSURE VESSEL) SHOULD **NOT** BE MORE THAN 10 METERS
- PUMP BODY SHOULD BE PLACED **30 CM UNDER THE WATER SURFACE** FOR BEST PERFORMANCE
- **16 MM** TUBE HAS TO BE ABOVE WATER SURFACE
- PUMP BODY NEEDS TO BE **FILLED WITH WATER** TO START PUMPING PROCESS
- **NEVER** PLACE THE PMB IN DIRECT SUNSHINE
- KEEP THE 8 MM HOSE **AS SHORT AS POSSIBLE**
- MAKE SURE THE SOLAR PANEL IS IN **OPTIMAL ANGLE** TO THE SUN
- ALWAYS USE TUBES AND HOSES **RECOMMENDED BY SPOWDI**
- **CLEAN** THE FILTER CAN REGULARLY

TROUBLESHOOTING

Q. I STARTED THE PMB AND CAN HEAR IT OPERATING, BUT NO WATER IS COMING OUT OF THE SYSTEM

SOLUTION #1
Shake the pump up and down. Water will flow into the pump unit and the pump process will start.

SOLUTION #2
Block the 16 mm tube with your thumb for one second. Repeat this 5 times every two seconds

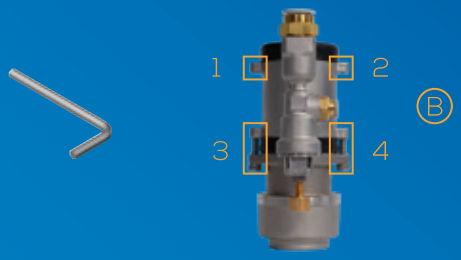
NOTE: The pump unit has to be filled with water for the pump process to start

Q. WATER IS COMING OUT FROM THE 16 MM TUBE

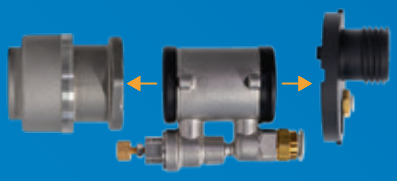
NOTE: If water comes out from the 16 mm tube, the membrane is **broken.**

REPLACING THE MEMBRANE

A: Remove the filter can



B: Use the Spowdi tool to remove the four screws holding the membrane



C: Release the pump body from the check valve and top flange

D: Remove and replace the membrane

1. Flip up

2. Pull out

3. Insert new membrane

4. Flip over the pump body and adjust the edges

E: Connect the pump body to the check valve and top flange

FEATURES

AUTOMATIC START AND STOP WHEN CONNECTED TO SOLAR PANEL

CAN PUMP DIRTY WATER WITH GRAVEL AND MUD

GOING DRY WILL NOT CAUSE ANY NEGATIVE IMPACT

MAINTAINED EASILY COMPARED TO OTHER ALTERNATIVES

LIGHTWEIGHT AND CAN BE CARRIED BY ONE PERSON

USEFUL FOR DRIP IRRIGATION

NEW PENDANT TECHNOLOGY

ROBUST SYSTEM

BENEFITS

PANEL EFFICIENCY OF UP TO 15.53%

CAPACITY TO PUMP OVER 20,000 LITRES A DAY

RUNS ON BATTERY AND SOLAR POWER

24 MONTHS WARRANTY

COMPATIBLE WITH 12V BATTERY

PUMPS UP TO 15 METERS

20-MIN OPERATION WITH BUILT IN BACKUP BATTERY

TECHNICAL SPECIFICATION

POWER SOURCE: SOLAR PANEL 150 WATT				
SUN RADIATION: >750 WATT/M²				
POWER	12 V	12 V	12 V	12 V
HEAD (METER)	1	5	10	15
WATER FLOW (L/MIN)	42	20	12	8
WATER FLOW (L/DAY)	20160	9600	5760	3840
ENERGY CONSUMPTION	50 W	50 W	70 W	70 W
SYSTEM TOTAL WEIGHT	15 Kg			
WARRANTY: 24 MONTHS FOLLOWING THE SERVICE SCHEDULE				

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