

Solar Greenhouse Fan – Installation Instructions



For an efficient system, the total fan capacity should be about two times the floor area. For example, in a 20' x 100' greenhouse, the fan capacity should be $20' \times 100' \times 2 = 4000$ cfm. Each Solar Greenhouse Fan will produce between 1000 and 1500 CFM, depending on sunlight.

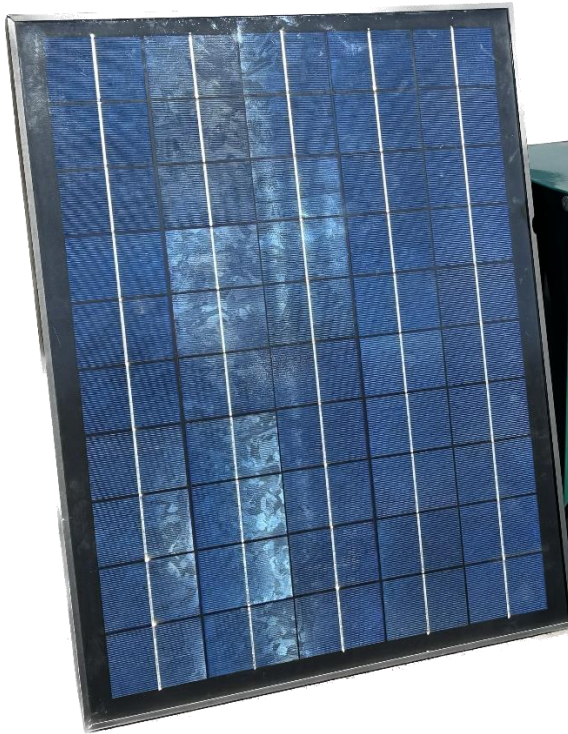
Thank you for your purchase of the Solar Greenhouse Fan. This unique fan will keep your greenhouse cool in summer months.

Safety Information

1. Please do not connect the solar panel when assembling the greenhouse fan.
2. All pre-set screws must be double checked and re-tightened where necessary before installation.
3. Do not place objects in the path of the blades.
4. The outlet box and support structure must be securely mounted and capable of reliably supporting a minimum of 35lbs (15.9kg).
5. To avoid personal Injury or damage to the fan and other items, use caution when working around or cleaning the fan.

Included components

50-Watt Solar Panel



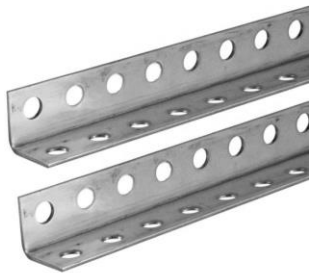
Container to hold 2 12-Volt backup batteries, min 6 amp.



Louvered fan housing with fan



Forward/Reverse thermostat controller (Fahrenheit and Celsius)



Angle iron for attaching the solar panel to the greenhouse

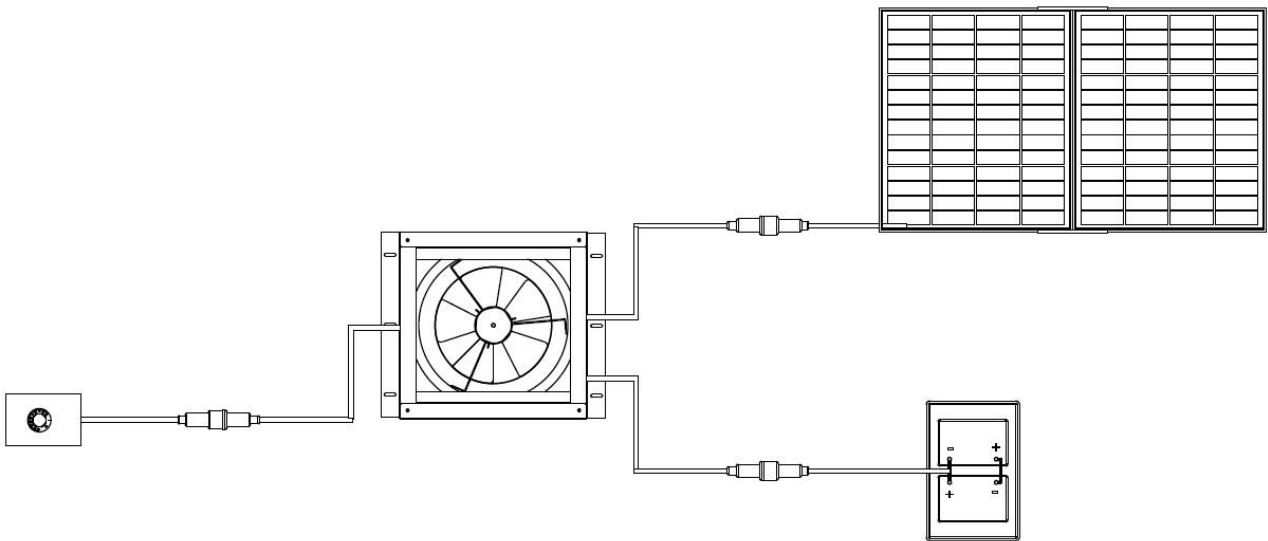
Self-tapping metal screws



Tools You Will Need

- Screwdriver drill
- Ladder

Basic Wiring Diagram



Installation

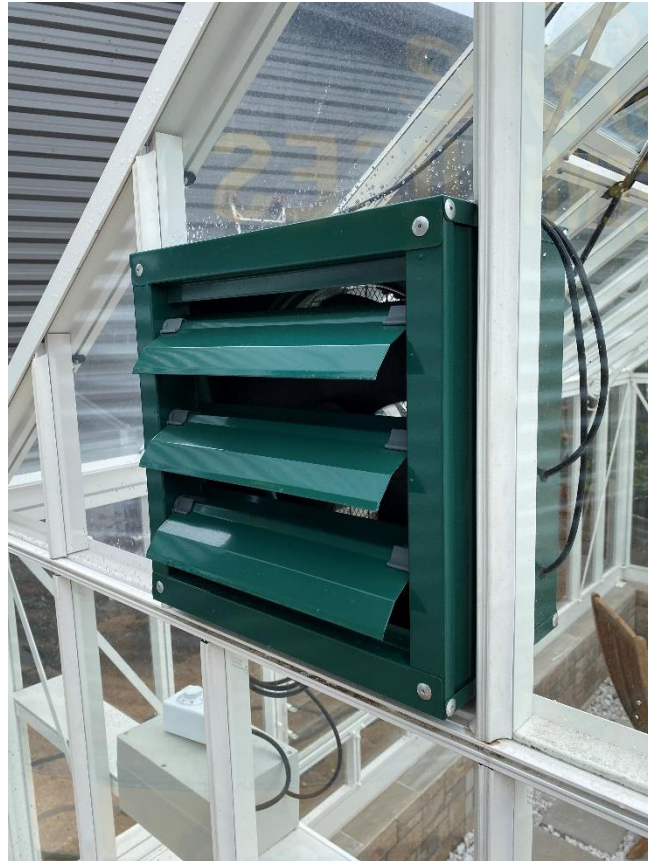
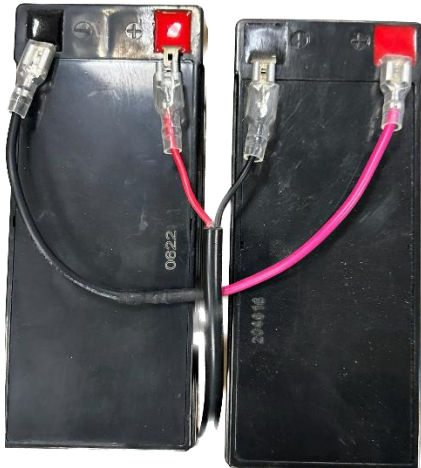
- The housing should be installed at the highest horizontal support bar
- NOTE: Make sure the length of power cord will reach from the housing to the solar panel which will be mounted on the roof or on a pole.
- If installing two fans, simply choose a location on each end towards the top. The louvers should always be facing outside.
- Use the switch on the controller to select airflow direction.
- Once your housing location is determined, use self-tapping stainless screws to secure the fan along at least two sides of the housing. If you can connect to a third stable vertical or horizontal support, then that is best.



Battery box mounting

The battery box will hold two standard 12V Rechargeable batteries. Recommended amperage is between 7 to 10 amps.

Make sure the batteries will fit in a 9.5" long x 6.25" wide x 4.75" tall box. Therefore, each battery needs to be a maximum of 3" wide.



Wiring for 2 batteries in box

The battery box may sit on a ledge within your greenhouse (as shown above) or can sit directly on the fan housing.

The fan will operate without backup batteries; however, the batteries are recommended to operate the fan on cloudy days. The fan operates on battery power, and the batteries are charged by the solar panel.

Controller operation and airflow

The controller operates as a thermostat. Celsius and Fahrenheit settings are visible on the knob. Set your desired minimum operating temperatures on the knob. The switch will allow the fan to change the airflow. If you have one fan, you should have the louvers facing out, with the airflow going out of your greenhouse. Ideal placement should be on the opposite end of your door. Fresh air will need to come in to replace the hot air going out. Therefore, a second fan may be needed near your door side to provide intake.

Panel installation

You will need to place the panel in a location on the roof of your greenhouse (or a clear path to the sun near the ground) which gets maximum sun. Use the angle iron and self-tapping screws to screw into the frame of the solar panel and a support bar on the greenhouse. Four screws minimum are recommended. You can adjust the angle iron and overlap if necessary to fit the solar panel to your greenhouse structure.



(Image courtesy of Exaco Greenhouses)

Panel placement

The more sun that hits the panel, the faster the motor will turn. We recommend facing the panel towards the afternoon sun, which would be slightly northwest (in the summer time). However, if the panel gets full sun throughout the day, the fan will operate. Shade will stop the fan.

Louver operation

The louvers are designed to open and shut automatically. You will not be able to manually open or close the louvers.