

Solar Fan Installation Guidelines

The Solar Powered Vent Fan and Kits are primarily used for gable installations although they can also be roof mounted, which will require much more materials and skill level. If you plan to roof mount the fan, we suggest that you retain a licensed contractor.

The fans require an opening equal to the ring diameter. The opening should be where the current gable vent is, or at the highest practical point on the gable. These fans have 4 bolt down pre-drilled holes to anchor them to 2" x 4" wood studs. The spacing between the 16" or 18" spaced studs will be filled with 2x4s until the opening matches the ring diameter. The fan is bolted to the 2x4 frame work from the inside. That will set the fan flush with the 2x4 framework. To the frame work, a 1/4 mesh screen should be installed to keep small animals and debris from entering the attic. In front of the screen, a shutter, either stationary or movable, should be installed.

Note:

- 1)When these fans are installed on greenhouses, be sure that the framework is of adequate material and strength to support the fan's weight and possible vibration.
- 2) If a temperature controller is installed, it should be inside of the vented space so that it senses the interior temperature.
- 3)If no controller is installed, the fan will turn on as soon as there is enough sunlight, and will shut down when sunlight decreases sufficiently.
- 4)These fans do not require, nor is it recommended to be used in conjunction with batteries. Daylight operation only.

In the case of the OVF outhouse fan, it requires a standard 4" vent pipe that it will be slipped over. It should never be made to slip into the vent pipe! If for some odd reason, the pipe diameter is too large for the fan, then slit the ring carefully to allow expansion and allow the fan to set over the pipe. Seal the ring to pipe gap with roofing adhesive.

For nonstandard installations in locations other than wood gables and roof, you are on your own to devise the correct installation procedure. We do not provide any information on the methods or materials required.

The solar panel(s) is set on aluminum channels in a 'H' shape then attached with two shorter channels to another set of channels to anchor to the roof. The solar panel must sit off of the roof at least 4" to 6" to allow cooling air to flow under it to prevent heat buildup. The spacing will also allow adjustment of the panels to face them directly south or southwesterly at the proper angle to allow maximum sunlight to reach the panel for the longest period of the day. How the aluminum channels are set up will depend on the roof slope and whether the slope faces south, or east or west.

All material to install the fan, other than a 20 foot long cable, are purchased by the buyer at a local hardware store; i.e.; 2" x 4" studs, 1/4" mesh screen, shutter, aluminum channels, nuts and bolts, screws and nails. The shutter is either purchased or made to fit the opening. If you plan to have a longer distance between the solar panel and the fan, then that extra length of 20 gauge cable has to be purchased also.

As in the past, there will be installations that will not be as simple as the basics above, and for which we cannot provide assistance. Think through what you have to do, what you have to purchase before you order the fan/kit.

The chart below shows the voltage and amperage for the corresponding rpm and cfm for the 12" and 16" fans. When broken in, there should be a 10% drop in power consumption. The teal highlighted cells refer to fan motors powered directly by a 12vdc solar panel. The yellow represents the 24vdc solar panel.

These figures are examples of typical fans and do not accurately represent the operating properties of the fans we sell.

12 Inch Fan Specifications				16 Inch Fan Specifications			
Volts	Amps	RPM	CFM	Volts	Amps	RPM	CFM
12	1.17	1100	740	12	1.47	1000	810
13	1.32	1200	950	13	1.66	1100	1000
14	1.47	1275	1050	14	1.84	1200	1100
15	1.54	1300	1100	15	2.06	1250	1200
16	1.73	1350	1200	16	2.30	1350	1250
24	3.20	1700	950	24	4.20	1800	2000
25	3.40	1750	1100	25	4.40	1850	2100
26	3.80	1800	1175	26	4.75	1900	2200
27	4.00	1850	1250	27	5.00	1925	2250
28	4.20	1900	1430	28	5.30	1950	2275

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