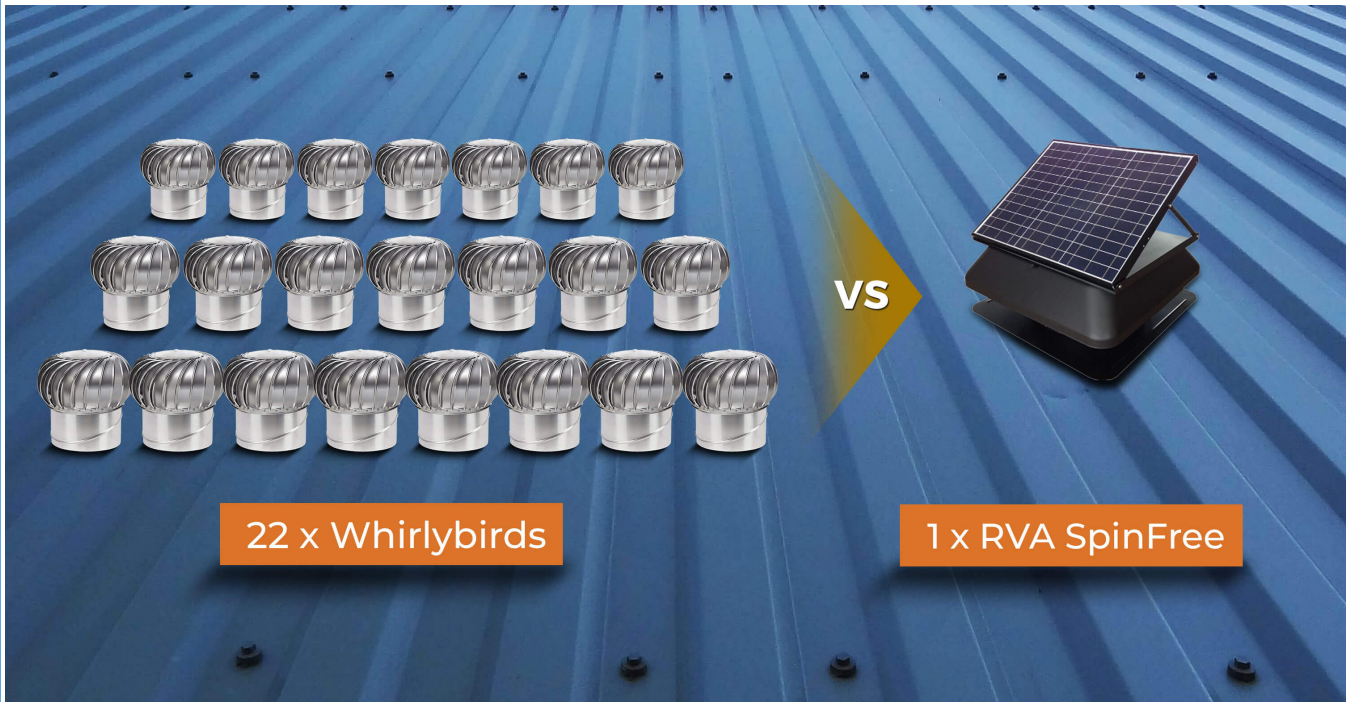


# Solar Powered Roof Ventilation Fan



# Overview...



A Compact Axial Flow Solar Ventilation Fan ,  
Taking Advantage Of Natural Free Solar Power,  
Making High Efficient Ventilation By Dc Motor,  
As A Practical & Cost-effective Green Ventilation Solution  
For A Healthy And Comfortable Environment!

# Function

## Improving air circulation



Taking advantage of the free & clean solar energy, this roof exhaust fan will pump out interior stale, heat air to improve the air circulation indoors, balance your house temperature, providing a refreshing ventilation and more environmental-friendly surrounding without consuming any electricity.

## Extending roofing lifespan

Being exposed long to the strong sun, your roofing underlayment may go weak and even lose efficiency under the very high temperature. This roof ventilator can help reduce such heat to prolong their lifespan and to help you save certain maintenance or replacement fee.

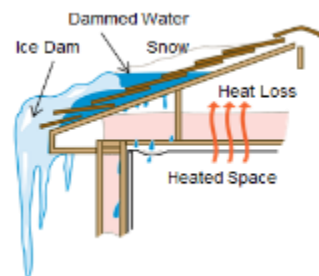


## Reducing moisture & harmful mildews

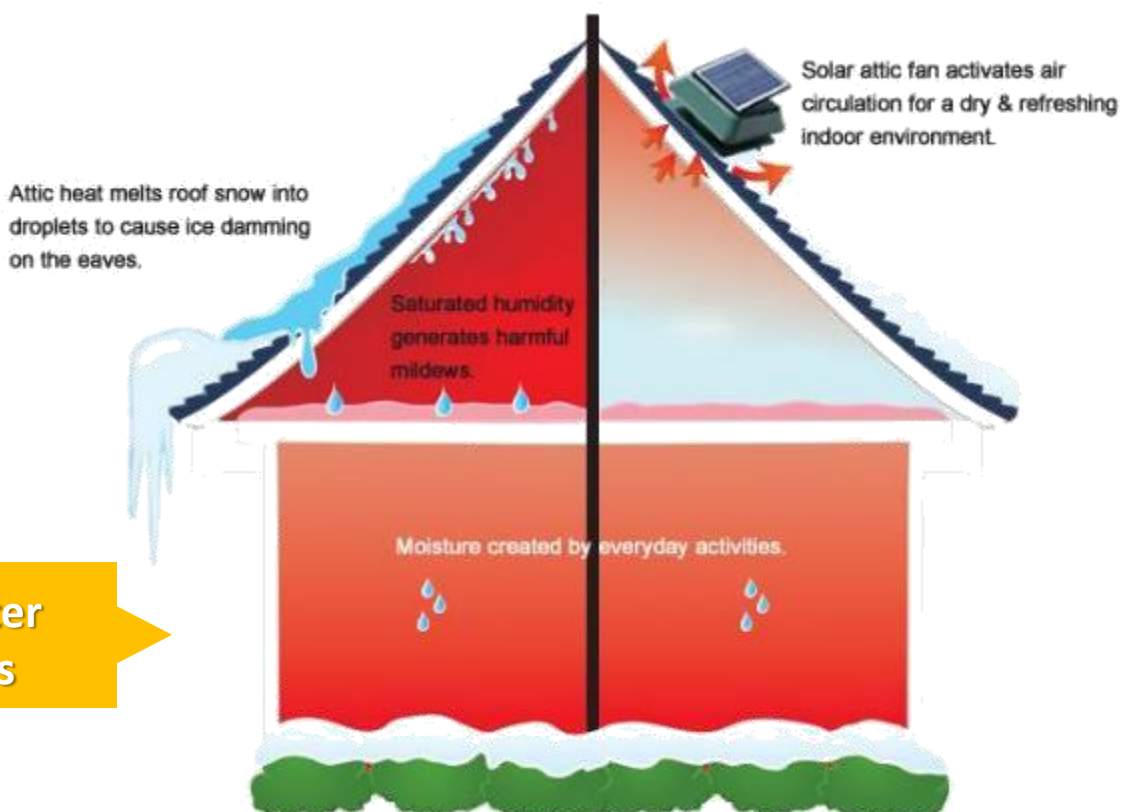
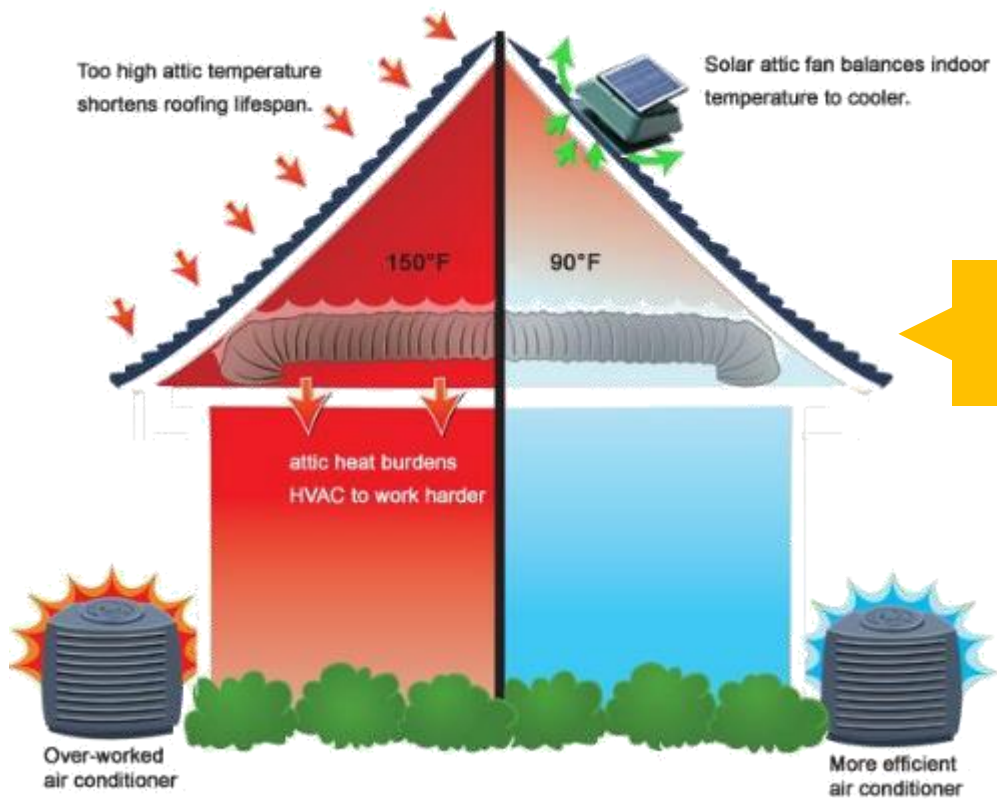
When collided with chilly attic-roof in winter, the interior warm & humid air will condense into water droplets, such saturated humidity might cause dangerous electrical short circuit or create mildews to harm your plasterboards. An adequate & more active indoor ventilation provided by this exhaust fan can help remove these moisture contents & harmful elements for you.

## Preventing ice-dam

In snowy winter, interior warm air could melt those snows at roof to generate droplets falling down to the eaves. These droplets will then refreeze into ice damming on your roof and arousing dangers, this solar ventilator can help preventing such unsafe factors through keeping the indoor environment dry.



## Reduce the load on air-conditioner and HVAC system





# Application

Industrial Workshop, Residential House, Garage, Basement, Agricultural Green House, Animal Breeding House, Livestock Feeding Shed...



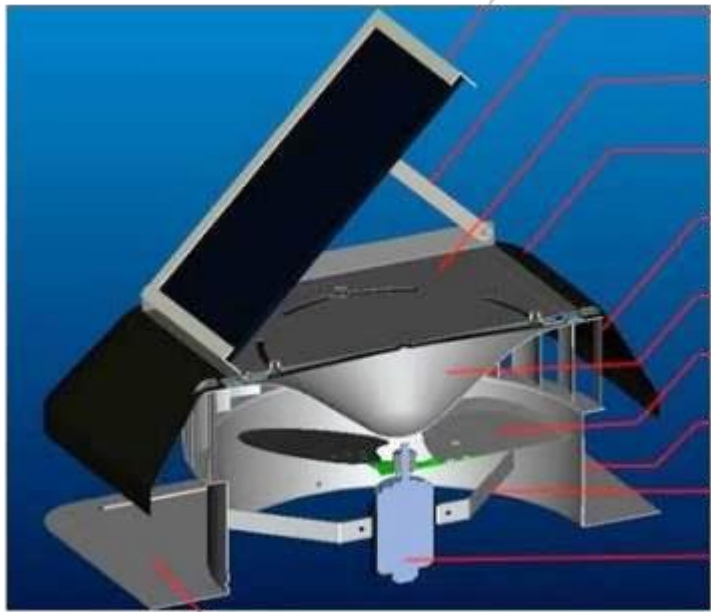
*Meet wide range of applications !  
Suit all kinds of roofs installation !*



# Structure & Specs

## Part Descriptions 1:

(for the solar panel adjustable models)



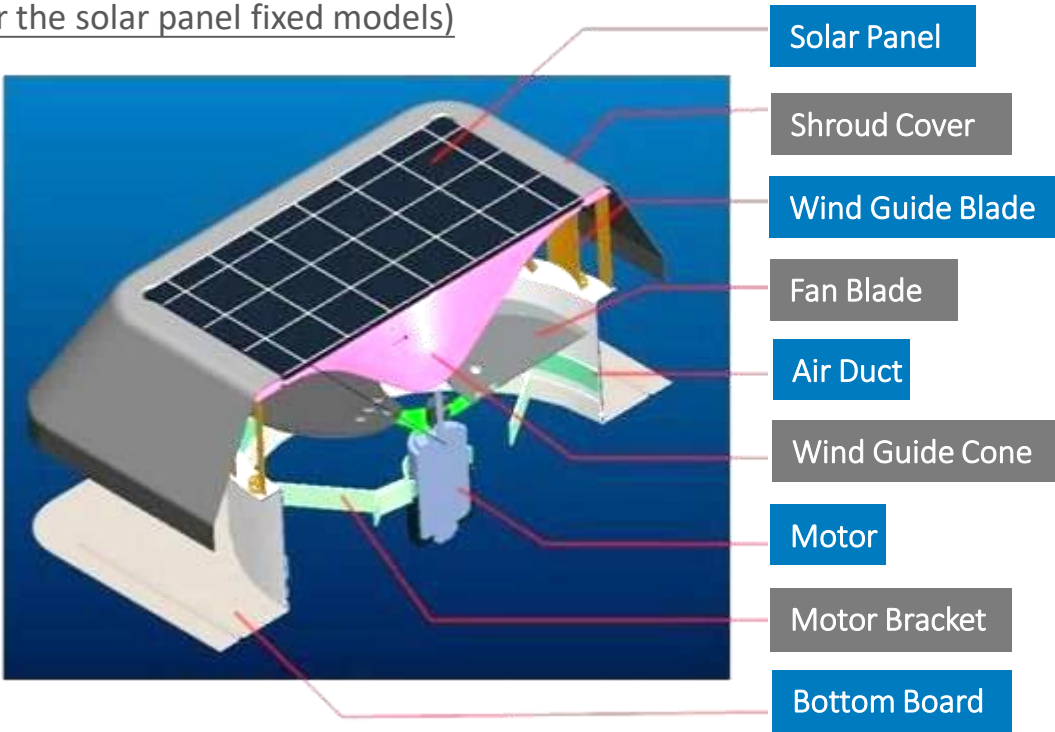
- Solar Panel
- Angle Adjustment Bracket
- Left/Right Regulating Plate
- Shroud Cover
- Wind Guide Blade
- Wind Guide Cone
- Fan Blade
- Air Duct
- Motor Bracket
- Motor
- Bottom Board

## Bill Of Material (for the solar panel adjustable models)

| Item | Part Name                   | 12” FAN                                | 14” FAN                                 |
|------|-----------------------------|--|---|
|      |                             | Part Description                       | Part Description                        |
| 1    | Solar panel                 | Polycrystalline solar panel            |   |
| 2    | Angle adjustment bracket    | Material:<br>Galvanization steel, δ2.0 | Material:<br>Galvanization steel, δ2.0  |
| 3    | Left/Right regulating plate |  | Material:<br>Galvanization steel , δ1.0 |
| 4    | Shroud cover                |  |   |
| 6    | Wind guide blade            |  |   |
| 7    | Air duct                    |  |   |
| 8    | Fan blade                   | Material: Aluminum                     |   |
| 9    | Motor                       | Brushless DC Motor                     |   |
| 10   | Motor bracket               | Material: Galvanization steel , δ2.0   |   |
| 11   | Bottom board                | Material: Galvanization steel , δ1.2   |   |

**Part Descriptions 2:**

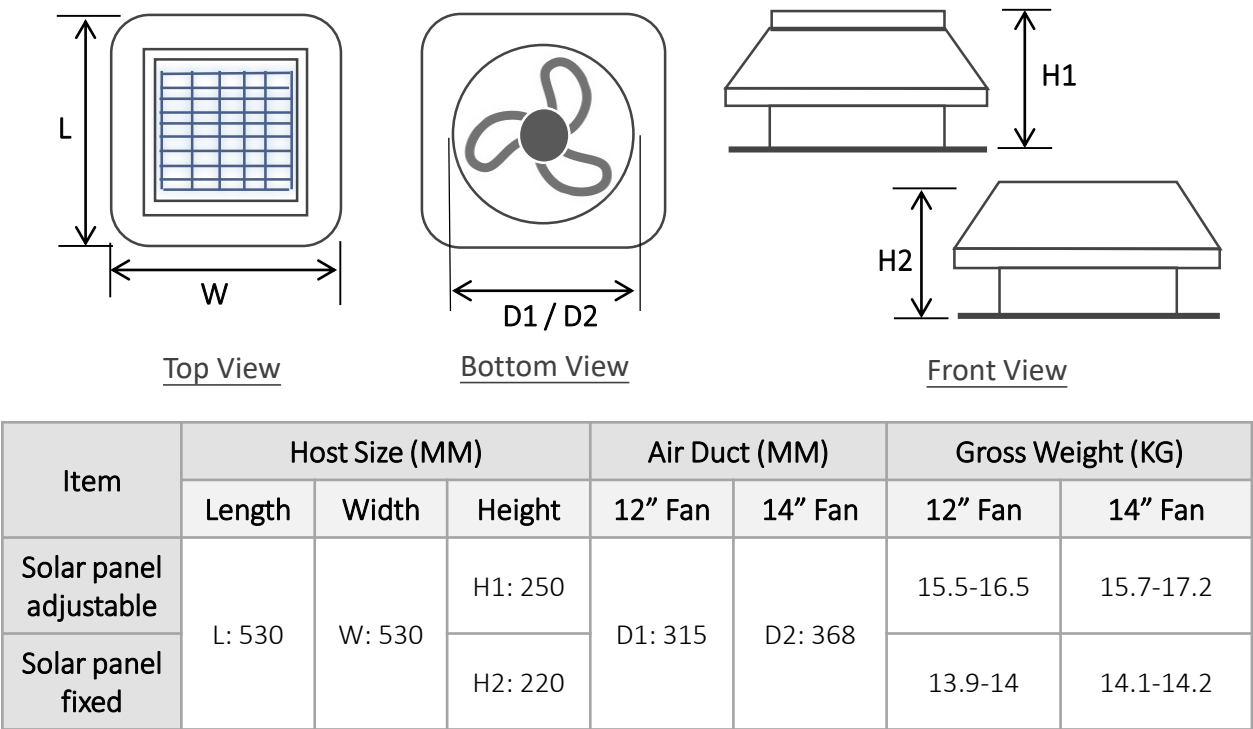
(for the solar panel fixed models)



**Bill Of Material (for the solar panel fixed models)**

| Item | Part Name        | 12" FAN                              | 14" FAN          |
|------|------------------|--------------------------------------|------------------|
|      |                  | Part Description                     | Part Description |
| 1    | Solar panel      | Polycrystalline solar panel          |                  |
| 2    | Shroud cover     | Material: Galvanization steel , δ1.0 |                  |
| 3    | Wind guide cone  |                                      |                  |
| 4    | Wind guide blade |                                      |                  |
| 5    | Air duct         |                                      |                  |
| 6    | Fan blade        | Material: Aluminum                   |                  |
| 7    | Motor            | Brushless DC Motor                   |                  |
| 8    | Motor bracket    | Material: Galvanization steel , δ2.0 |                  |
| 9    | Bottom board     | Material: Galvanization steel , δ1.2 |                  |

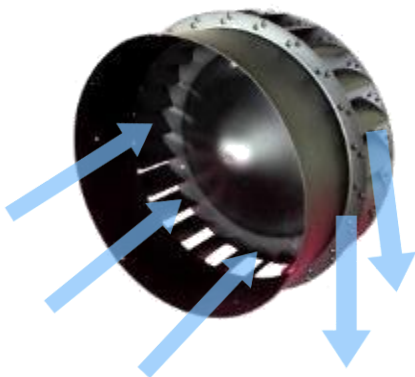
Dimension Table



Patented Air Draft Design, for a Higher Efficiency

Our patent-designed wind guide cone with 24pcs turbine wind guide blades structure is adopted in this ventilator. Following a 360-degree swirl ventilation mode and being free from outside airstream interferences, it can work efficiently in sunny days to exhaust out the indoor heat & smell and not let any exterior air going in, so as to keep the living & working environment always clean & fresh.

In raining windy days, this air draft design can also efficiently prevent the rains or winds from flowing backward.





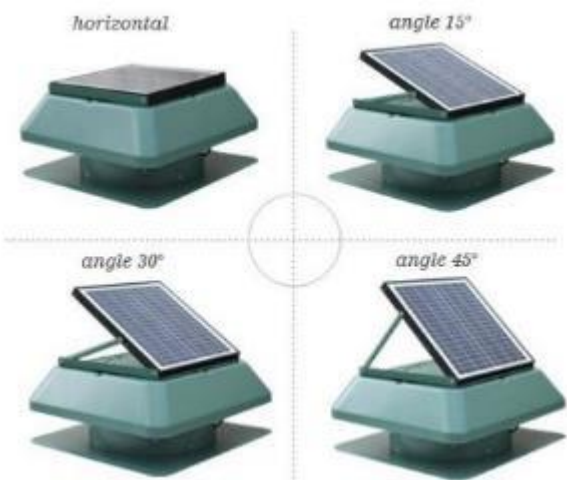
## Integrated & Adjustable Solar Panel

You can rotate the regulating plate and adjust the fan's brackets to setup the direction & angle of solar panel!



### Horizontally 180° Regulation

This roof exhaust fan carries a horizontal adjustment platform design for the solar panel to rotate left or right and face towards the sun, this rotation can be as big as to 180°.

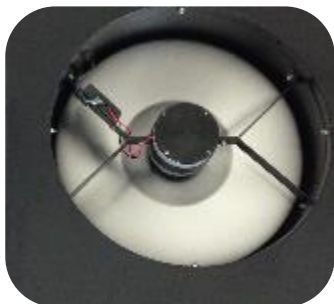


### Vertically 4° Positioning

To capture most direct sunlight for the device to work most efficiently, its solar panel can be adjusted vertically at 4 angles, that is 0°, 15°, 30° & 45°.

## High Quality Brushless DC Motor

Solar fans are equipped with high quality brushless dc motor. A brushless DC motor means: have no carbon brush, no mechanical commutation, no operation dissipation to ensure better performance and longer lifespan.



|                               |                         |
|-------------------------------|-------------------------|
| Voltage                       | 18V DC (variable 6~21V) |
| Power                         | = < 40W                 |
| Size                          | Diameter 86mm           |
| Motor Speed                   | 30~1750RPM              |
| Noise                         | <45dB (Super Quiet )    |
| IP Rate                       | IP68 ( waterproof)      |
| High quality ball bearing     |                         |
| High level efficiency         |                         |
| Motor shell is Aluminum alloy |                         |

# Models Selection

## Solar Ventilator--adjustable solar panel (with Square / Round shroud cover)



| Models<br>(square /round) | SN2013001<br>/ SN2013006 | SN2013002<br>/ SN2013007 | SN2013003<br>/ SN2013008 |
|---------------------------|--------------------------|--------------------------|--------------------------|
| Solar Panel               | 12W/ 18V                 | 15W / 18V                | 20W / 18V                |
|                           | 365x365x25mm             | 365x365x25mm             | 365x410x25mm             |
| Fan Blade                 | 12 inch                  | 14 inch                  | 14 inch                  |
| Air Flow                  | 1955 CMH (1150 CFM)      | 2295 CMH (1350 CFM)      | 2975 CMH (1750 CFM)      |
| Motor Speed               | 1650 RPM                 | 1450 RPM                 | 1550 RPM                 |
| Host Size                 | 530x530x250mm            |                          |                          |



| Models<br>(square / round) | SN2014006<br>/ SN2014008 | SN2016029<br>/ SN2016010 |
|----------------------------|--------------------------|--------------------------|
| Solar Panel                | 30W/ 19.5V               | 40W / 21V                |
|                            | 415x495x25mm             | 495x495x25mm             |
| Fan Blade                  | 14 inch                  | 14 inch                  |
| Air Flow                   | 3383 CMH (1900 CFM)      | 3791 CMH (2230 CFM)      |
| Host Size                  | 530x530x250mm            |                          |

## Solar Ventilator -- fixed solar panel (with Square / Round shroud cover)

| Models<br>Square / round | SN2013004<br>/ SN2013009 | SN2013005<br>/SN2013010 |
|--------------------------|--------------------------|-------------------------|
| Solar Panel              | 12W / 18V                | 15W / 18V               |
|                          | 354x354x4.5mm            | 354x354x4.5mm           |
| Fan Blade                | 12 inch                  | 14 inch                 |
| Air Flow                 | 1955 CMH (1150 CFM)      | 2295 CMH (1350 CFM)     |
| Motor Speed              | 1650 RPM                 | 1450 RPM                |
| Host Size                | 530x530x220mm            |                         |



**Solar Ventilator -- detachable solar panel**  
**(with Square / Round shroud cover)**

Occasionally, sunlight in where the ventilator be mounted may be blocked by chimney shadows or other surrounding objects, to have optimal function of solar vents, a detachable solar panel design can be better, as its solar module can be mounted more flexibly to avoid being blocked from sunlight!



|                            |   |
|----------------------------|---|
| Models<br>(square / round) | SN2014002 / SN2014004                             |
| Solar Panel                | 30W / 19.5V                                       |
|                            | 415x495x25mm                                      |
| Fan Blade                  | 14 inch   |
| Air Flow                   | 3383 CMH (1990 CFM)                               |
| Ventilator Size            | 530x530x220mm                                     |
| Connection                 | with 3m cable to connect ventilator & solar panel |

**Color Selection: Black, White, Green, Orange**



**Accessory**



**Solar Battery System**

The battery collects & stores energy at day time to support the fan work continuously after sunset.

Please choose the suitable model according to local situation!

| Models            | SN2013011   | SN2015005                                       | SN2015024                                       |
|-------------------|---|---|---|
| Solar Panel       | 20W 16V   | 30W 16V   | 40W 16V   |
|                   | 365x410x25mm  | 415x495x25mm                                    | 550x495x25mm                                    |
| Battery Capacity  | 9.6 Ah  | 9.6 Ah  | 9.6 Ah  |
|                   | can be charged full after 7.68 strong sun hours                                   | can be charged full after 5.12 strong sun hours | can be charged full after 3.84 strong sun hours |
| Applicability     | Local effective sunshine more than 6 hours  | Local effective sunshine at least 4.5 hours     | Local effective sunshine just around 3 hours    |
| Battery Discharge | 500 mA average<br>fully charged battery can support fan to run 19.2 sunless hours |   |   |
| Connection        | with 3m cable to connect this solar battery system with fan                       |   |   |



Dual Power Adapter

When connected to an adapter, have the city power involved, the solar fan keeps running nonstop even in sunless periods.

AC Input: 100-240V

DC Output: 18V 1A

Standard: UL, CE...



Snap-action Thermostat

Attaching a thermostat to have the solar fan start / stop rotating at a certain temperature.

[25°C thermostat] On: 25°C +/-3°C; Off: 18°C +/-5°C

[28°C thermostat] On:28°C +/-3°C; Off: 21°C +/-5°C

(there is a 7°C temperature difference between on & off)



Power Cord Switch

A manual switch is added to have the solar fan on / off flexibly as per your need.



Metal Fan Guard

Attaching a metal fan guard to prevent fan blades getting damaged / animals going inside the house.

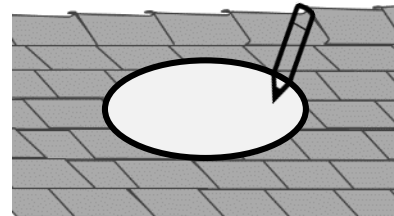
# Installation Guide

## Step 1. Draw and Cut A Circle as the Venting Hole

- Choose a place due south or southwest to the sun as mounting position for your solar fan, where the sun should not be shaded or blocked, so that your fan can capture direct and enjoy extended period of sunlight throughout the day.

Tips: The chosen position is 18 – 24 inches away from top of the roof peak and as close to the mid-point of house as possible.

- Cut out a complete hole at 12" or 14" diameter as the venting hole.



## Step 2. Position Your Solar Fan upon the Hole

- Don't bring the product up on roof until you finish cutting the mounting hole.
- Always secure your fan on roof to avoid injury.

## Step 3. Secure the Solar Fan

- Drill holes on bottom board and secure the fan with screws or nails. Then apply waterproof roofing sealant to the screw heads to prevent water percolation.



Notes:

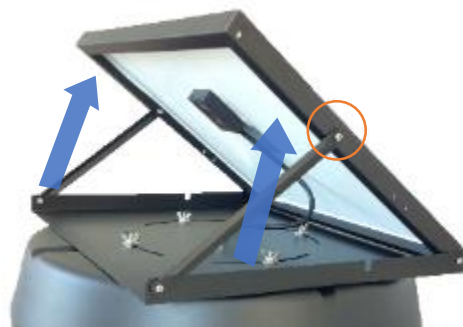
- Any shingles that remain loose should be fixed with nails & waterproof roofing sealant as well.
- If your ventilator is to mount on industrial metal roof, please apply waterproof sealant on 2 sides of bottom board and attach with additional metal bars, then spray waterproof sealant onto the metal bars to prevent leaking.



additional metal bars

## Step 4. Adjust Direction & Angle for the Solar Panel Adjustable Models

- Install the provided screws and brackets.
- Set up the solar panel direction and angle by rotating the regulating plate and adjustment brackets. The optimal adjustment is to have your solar panel 90° to the midday path of the sun.





# Warranty

| Product Part        | Designed lifespan | Warranty |
|---------------------|-------------------|----------|
| Metal Casing        | 20 Years          | 5 Years  |
| Solar Panel         | 25 Years          | 5 Years  |
| Brushless DC Motor  | over 10 Years     | 5 Years  |
| Lithium Battery     | 8 Years           | 2 Years  |
| AC/DC Power Adapter | 5 Years           | 2 Years  |

*The hereby lifespan & warranty terms are based on the product be used in regular residential housings, but not in those too humid or extreme condition places with acid and alkali corrosive gas / liquids.*



*Enjoy the sunlight, refresh your daily life!*



**Thanks for your Interest in our solar products!**

Please feel free to contact us for any further information.

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