



Instruction Manual
for
OSCAR Solar Air Collector



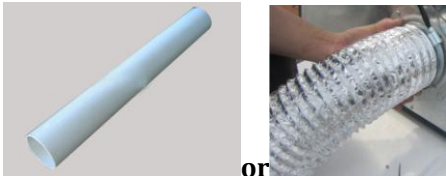

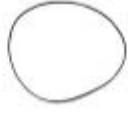


OS11/21/31 3-in-1 Function



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Contents:

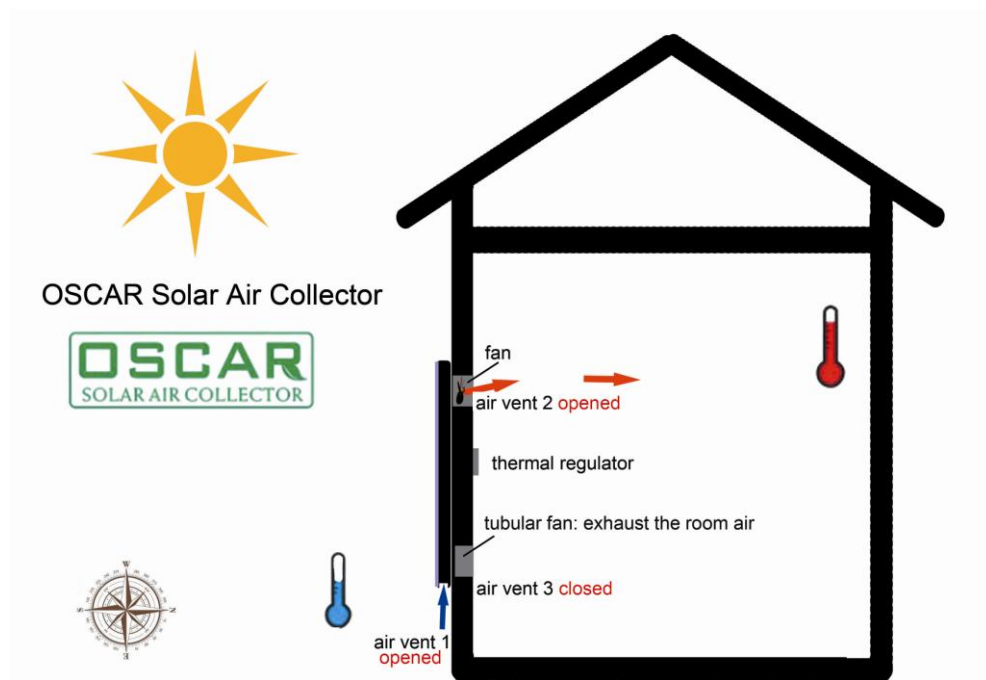
Solar panel with photovoltaic and ventilator backside	1pc	
Thermal regulator	1pc	 or
Plastic tube or flexible tube	1pc	 or
Flange connection of Aluminum hose to a solar panel, incl. silicone seal	1pc	
Seal for flange	1pc	
White diffuser flange	1pc	
Mounting screws	1 pack	

OS11\OS21\OS31\OS41—3 in 1 function model:

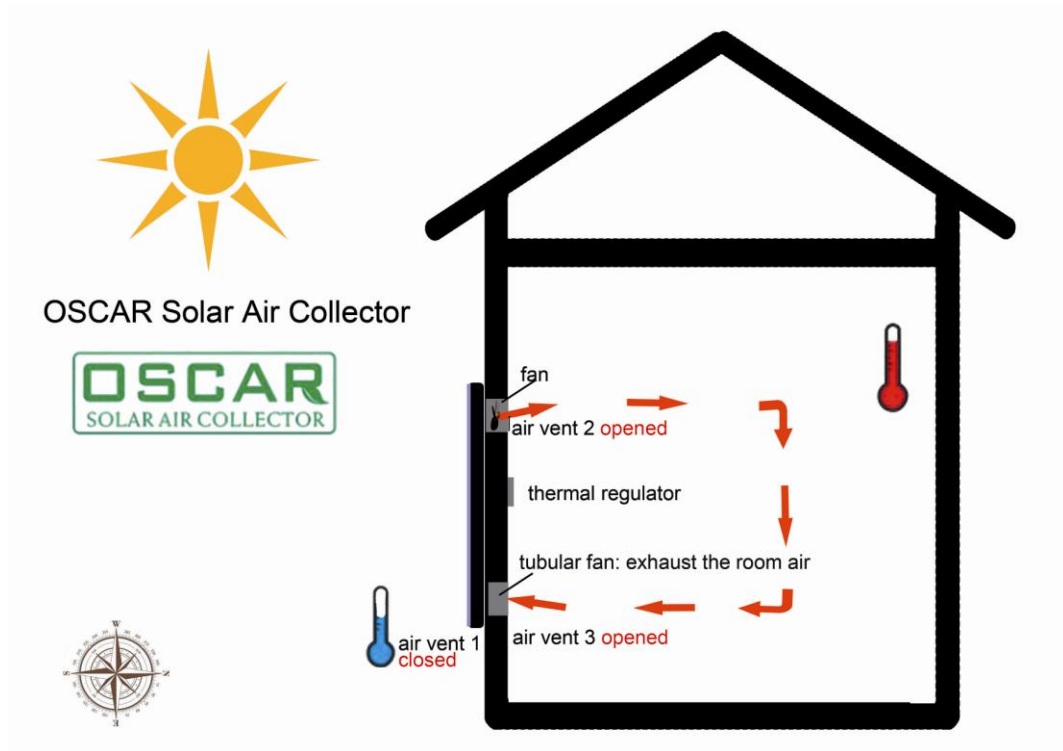


I Working Principle

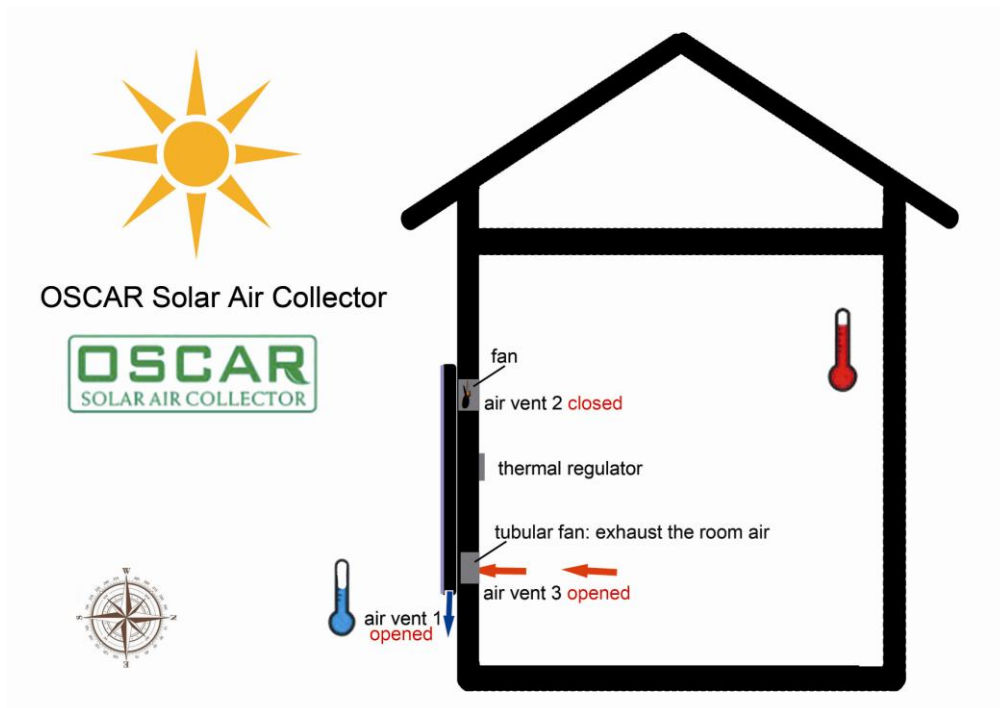
OSCAR solar air collector operates by taking in air at the bottom of solar air heater, and the air is heated several times by going through a special construction inside the panel. The heated or fresh air is blown into the room by a fan, driven by electricity generated from sunlight by photovoltaic panel. OS11/21/31/41 are models with 3 functions specified as below:



Function 1: When the air vent 1 and 2 is opened, air vent 3 closed, the system brings in heated fresh air into the room. Make sure LED thermal regulator set value is higher than the room temperature.



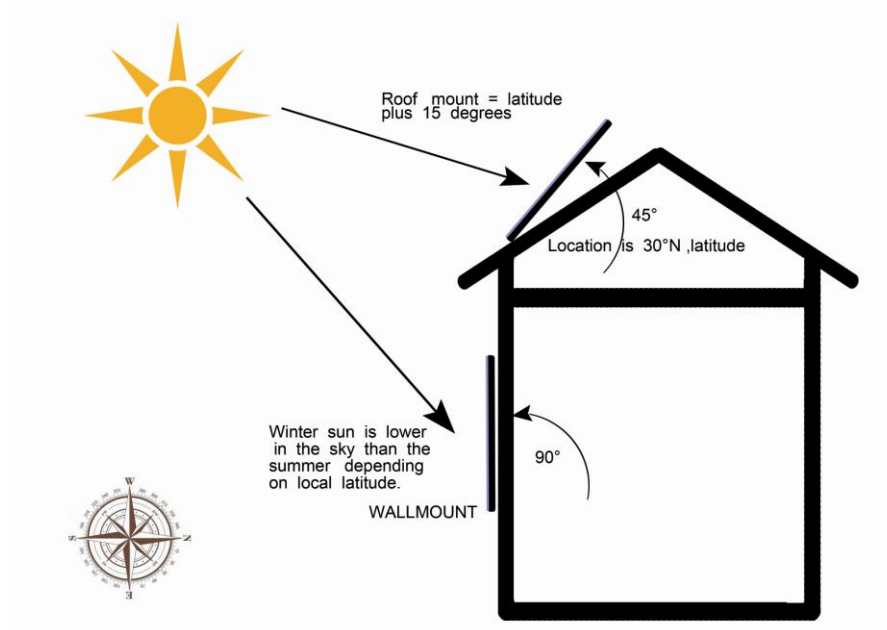
Function 2: When the air vent 1 is closed, air vent 2 and 3 are opened, the system heats the room air internally and achieves the best heating effect. Make sure LED thermal regulator set value is higher than the room temperature.



Function 3: When the air vent 2 is closed, air vent 1 and 3 are opened, the system exhausts the room heated air, as well as waste gas and humidity, which is very practical in summer time. Make sure LED thermal regulator set value is lower than the room temperature.

II Position Choice

Oscar solar air heater can be used anywhere – permanent residence, cottage, garage, colonial garden, garden shed etc. We recommend placing the product on a vertical surface providing the best angle between the panel and sun in winter and spring and autumn. The location must be in the direction where there is greatest opportunity for sun, because solar collector as its name indicates, depends on the sunshine. For north hemisphere, put the solar panel south oriented; for south hemisphere, put the solar panel north oriented. If roof mounted, The horizontal angle is between 45°C to 65°C. The closer to the poles, the bigger angel it is. The fan runs to blow as warm air in as possible – if the air becomes too hot, turn off the thermal regulator for the fan.



III Assembly Procedures:

1. Drill a hole for pipe going through.

Find a suitable site where the solar panel will receive as much sunlight as possible, and where a hole can be made in the wall through which the supplied tubing can be passed. – NB: When affixing the solar air heater, ensure that the inlets are at the bottom, so it can keep away from rain water.

Use the pipe to mark the location on the wall. And drill the wall, you can choose 108mm drilling bit.

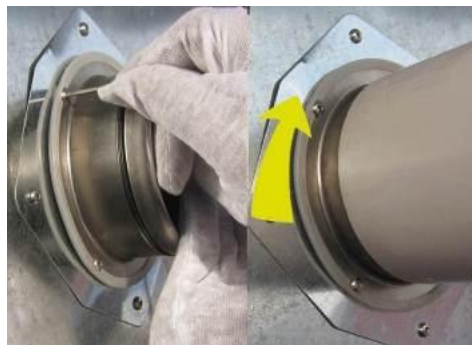




2. Mark where pipe is parallel with the wall. Measure the thickness of the wall and then shorten the pipe.



3. Assemble the flange and pipe. Fasten with the screws supplied. While assembling the pipe, rotating it and insert into the flange.



If flexible tube adopted, please follow the steps as below:



4. Mount the solar panel on the wall and put the pipe through the hole and go inside the room :

Pass the tube through the wall and use filler, expanding foam or some other product to seal. Make marks on the wall where it would be screwed according to the screw holes on the frame of solar air heater. If attaching to a wall drill 8mm diameter holes for the screws at the attachment points and place 8mm plastic expansion pipe in the holes. If attaching to wood it is likely that the appliance can be erected using self-tapping wood screws and no prior hole-drilling will be needed.

5. Fasten the panel on the wall.

Screw the appliance to the wall – do not tighten the screws fully until you are sure that the tubing is trim with the connector on the reverse of the panel.

6. Mount the inner diffuser.

Tighten the appliance completely in place and attach the diffuser to the wall inside the building – remember to pull out the wires from the diffuser if you wish to attach the thermal regulator.



It may also drill another small hole to let the cable going through.



7. Mount the thermal regulator beside the diffuser, and then connect the wires to the thermal regulator.

Note: For mechanical regulator, please connect wire to Position 1 and Position 3. There is no distinction for negative or positive poles.

For LED regulator, please follow its instruction manual.

If attaching to a wall drill 6mm diameter holes for the screws at the attachment points and place 6mm plastic expansion pipe in the holes.



8. Fit the cover and adjust the air outlet with the diffuser.



IV Hints & Tips

1. Where to Use It?

Solar air collector was created with the intent to supplement your heating system at home (to maintain a pleasant temperature year around at your beach house, farmhouse, or winter home) or to eliminate it if used for trailers, garages, sunrooms, storage buildings, workshops, green houses, barns, etc.

2. Supply Air From Your Air Collector

You might consider removing the inner cover (diffuser) which sits in the pipe, if the appearance of the hole does not bother you. The result is a little less resistance in the injection, which translates to a little more heat blown in.

3. Houses With An Overhang

Remember that during the installation of your solar panel, you need to take into account the relationship between your overhang and the height you place your solar panel. The overhang will produce different shadowing during the season because the sun changes elevation in the sky. In the summer, the sun is high and you will get a long shadow onto the wall, but during the winter, you will get a smaller shadow because the sun is low in the sky. If placed somewhat in a shadow, you will discover that the fan may go down in speed, or even stop.

4. Constant Temperature Controls

Even in cold winter days, the panel will blow air that is 25°C – 40°C warmer than the outside air temperature. The panels are thermostatically controlled so that the fan turns off when a certain temperature is reached.

5. Fan maintenance

The fan can last for more than 30000 hours. When it doesn't work, exchange with a new fan as following steps:

Step1: Remove the hexagonal metal plate.

Step 2: Unscrew the fan with screwdriver.

Step 3: Pull out the wire connector of the fan and change new fan.



Step1



Step2



Step3

6. FOR ITEM WITH AIR FILTER, IN CASE THERE IS LESS AIR BE ABSORBED OR ABNORMAL SOUND, PLEASE CLEAN OR CHANGE THE FILTER TO AVOID BLOCKING.

7. Please install the tubular fan to the hole at the backside by the following steps below:



Figure 1



Figure 2



Figure 3



Figure 4



Figure 5

Step 1: Find the cable of the fan. (Figure 1)

Step 2: Connect the cables. (Figure 2)

Step 3: Turn the fan by fingers to avoid any wire touch the fan blades. (Figure 3)

Step 4: Fix the tubular fan on the panel with screws. (Figure 4, 5)

After the fan installed, please turn the fan blades by hand to make sure the wire connection does not touch them.

