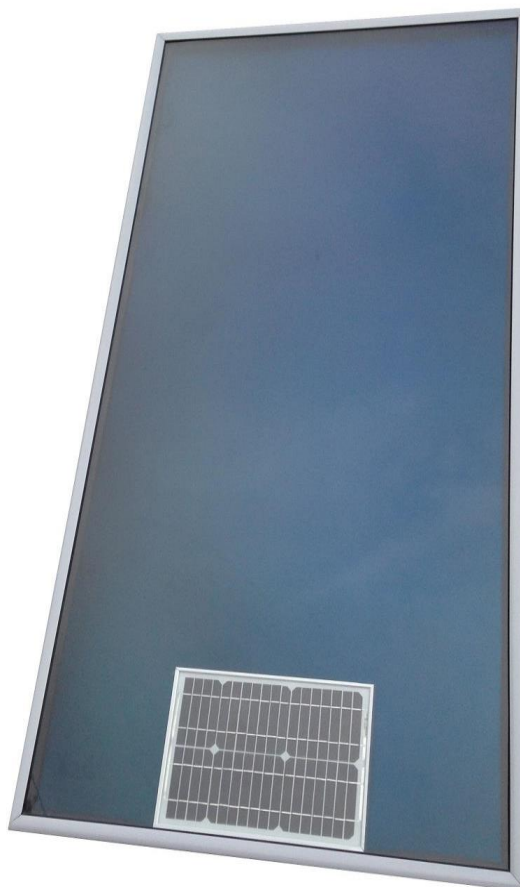


AIR COLLECTORS "AIRSOL"

INSTALLATION AND USER MANUAL



**MODELS: AIRSOL 10, AIRSOL 20 &
AIRSOL 35**

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1. Presentation

The solar air collector AIRSOL heats air that flows inside the room area with the help of an integrated fan.

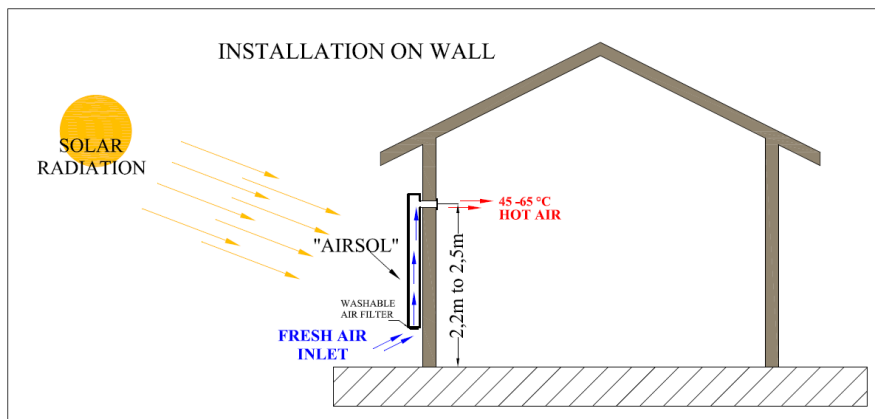
The fan operates with solar photovoltaic panels that are also built into the unit. For big industrial projects the AIRSOL 35, is also available without PV and fan.

The device can take fresh air from the ambient OR recirculated air from the heated room. It is also possible for the user to adjust it to partially recirculated air with a supplement of fresh air.

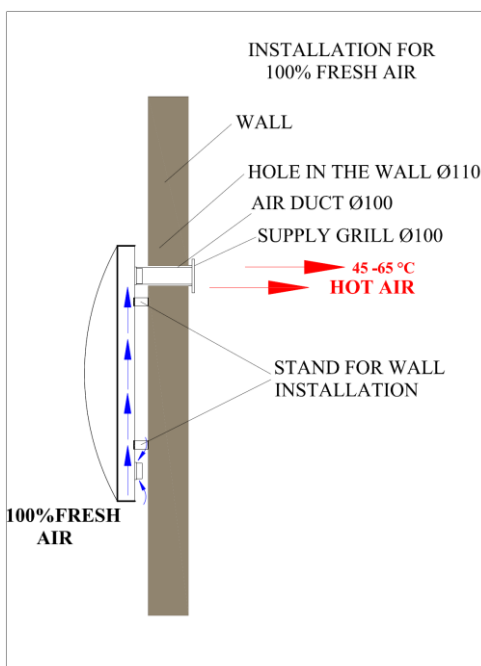
In any case the air is filtered before is heated and flows into room space.

The AIRSOL can be installed on a South or Southeast or Southwest wall (for the northern hemishpere) (see drawing 1, 1a &1b) or on a terrace (see drawings 2& 3) or on a tile roof (see drawing 4).

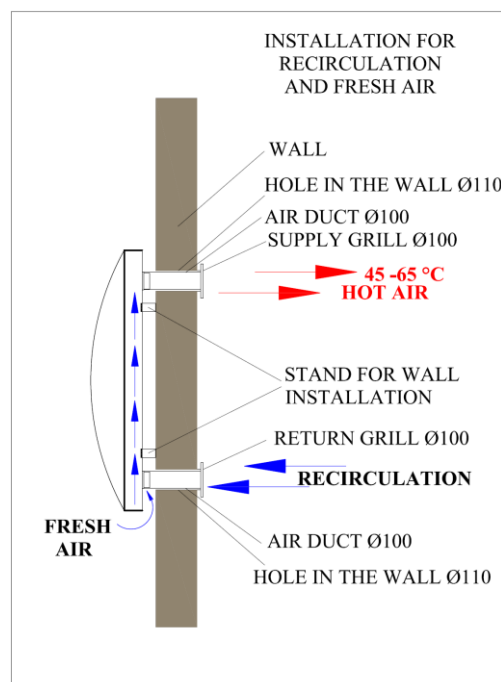
For the AIRSOL 10 & 20 you will need a duct of Ø100 diameter of proportional length and similar grille, for the AIRSOL 35 a duct of Ø200 diameter will be needed.



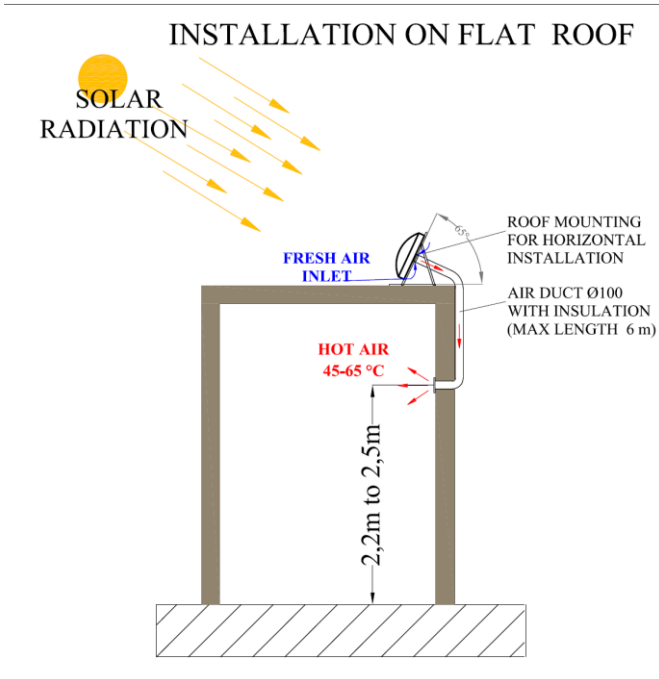
DRAWING 1



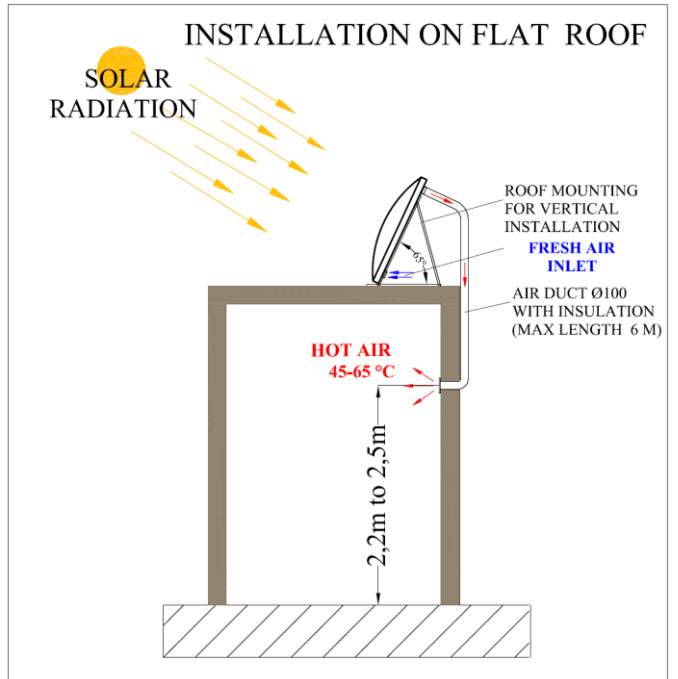
DRAWING 1a



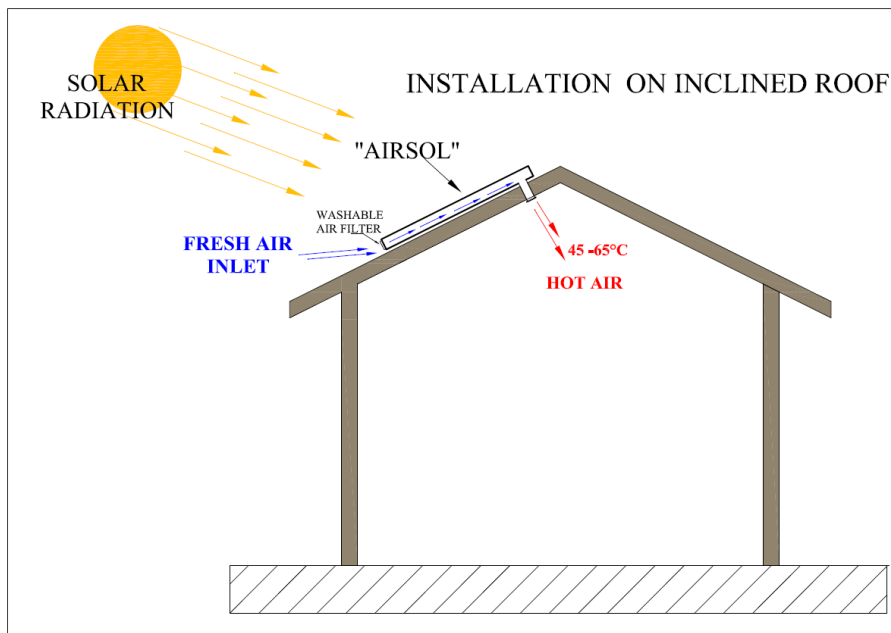
DRAWING 1b



DRAWING 2



DRAWING 3



DRAWING 4

2. Introduction

The present document demonstrates detailed installation instructions for the solar collectors using the support frames and accessories included in the supply.

Before proceeding with the installation of the collectors, read these instructions and make sure you have understood. If you have questions about the materials or on the assembly process described in this document, contact your supplier via telephone, fax or e-mail. Improper installation of the collectors may cause an unsatisfactory operation of the solar system, compromising its durability and even be dangerous for the people or the goods.

The instructions of this document do not exempt in any way the compliance with existing regulations and provisions of technical and administrative application at the place where the facility is located.

The installation of solar collectors without following the instructions in this document and / or regulations will invalidate the warranty of the product.

The installer will check before starting the installation that he has all the necessary parts and all the security measures have been taken in order to carry out the installation safely. The installer must use protective gloves to avoid any risk of burns or cuts during handling of collectors or its support frame.

3. Parts Included

The supply consists of:

- One or more solar collectors
- One or more support frames
- One or more fitting and accessories.

3.1. Solar Collectors

3.1.1. Models

TYPE	DIMENSIONS (mm)	SURFACE m ²	NOMINAL VALUE**	RECOMMENDED FOR ROOM AREA
AIRSOL 10	1545x700x178	1,08	700Wp	10 to 40 m ²
AIRSOL 20	2050x1040x195	2,13	1500Wp	20 to 60 m ²
AIRSOL 35	2833x1285x140	3,65	2700Wp	35 to 100 m ²

3.1.2. Packaging

The solar air collectors are supplied individually packaged in carton boxes. The collector model is indicated on the outside of each box. Depending on the number of units ordered, collectors can be supplied palletised in groups of up to 7 units.

4. Installation

The support frames sets are composed of elements that are shown in Figures 1 & 2.

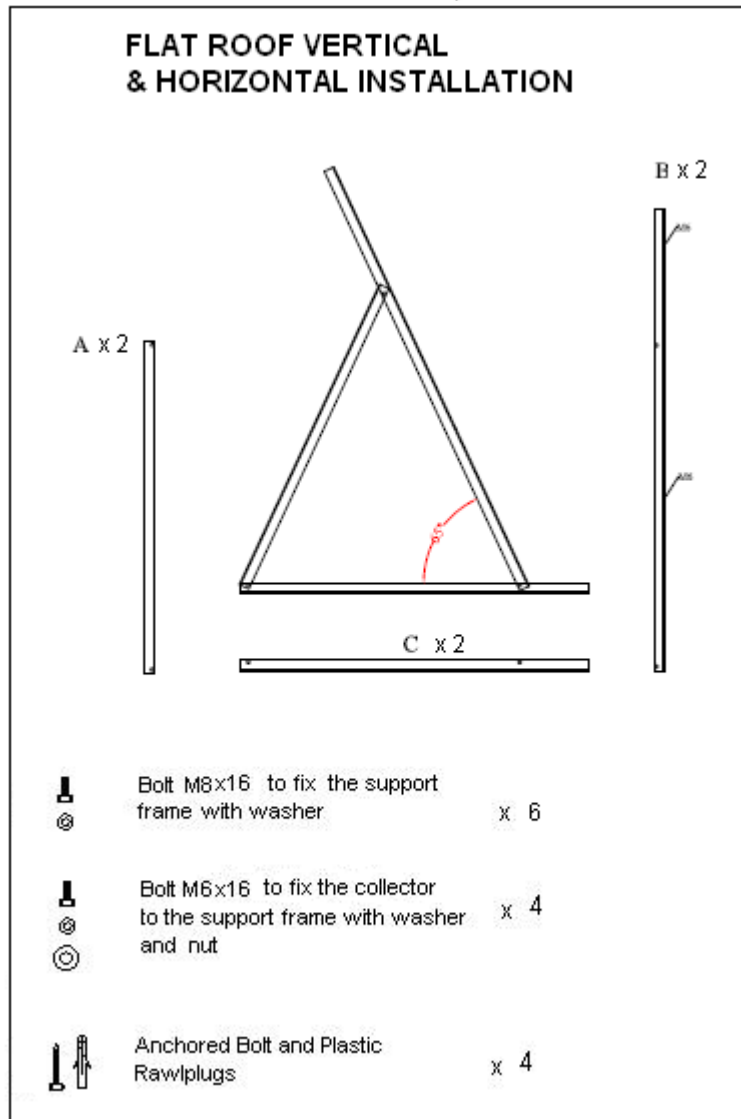


Figure 1

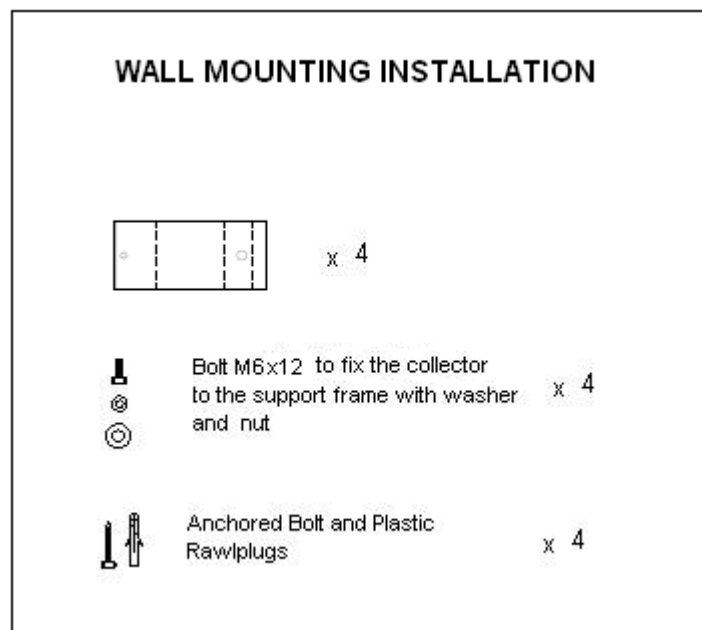


Figure 2

4.1. Flat Roof Horizontal Installation

Take off the cover of the carton box and remove the polystyrene protections (see pictures no. 1 & 2). The support frame consists of two triangles frames, partly preassembled. Screw the profiles A and C with the bolts and nuts provided and tighten. (see picture no. 4).

Fix part B of the triangle frame on the corresponding nuts on the collector (see picture 5) and tighten with bolts M6.

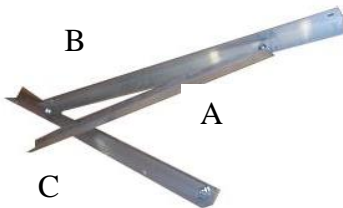
Lift the collector and join the structure to the floor, placing the collector in operation position and fit it using the raw plugs and anchored bolts supplied on the flat roof (see pictures 7 & 8).



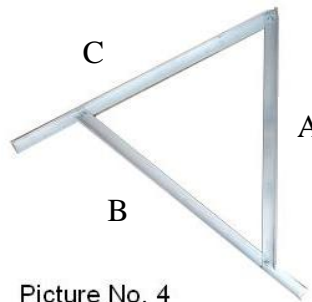
Picture No. 1



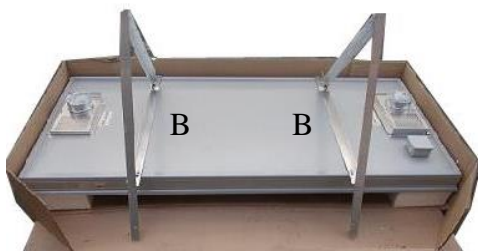
Picture No. 2



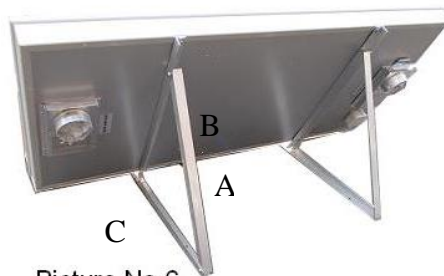
Picture No. 3



Picture No. 4



Picture No. 5



Picture No. 6



Picture No. 7



Picture No. 8

4.2. Flat Roof Vertical Installation

The assembly of solar air collectors on a flat roof in vertical position is done in a manner similar to that described above; with different size of the support triangles frame placed vertically in a parallel manner on the back of the collector (see picture 9).

Lift the collector and join the structure to the floor, placing the collector in operation position and fit it using the raw plugs and anchored bolts supplied on the flat roof (see pictures 11-12).



Picture No. 9



Picture No. 10



Picture No. 11



Picture No. 12

4.3. Wall Mounting Installation

Take off the cover the carton box and remove the polystyrene protections (see picture no.1).The support frame consists of 4 stainless steel mounting brackets. Fix the 4 mounting brackets on the corresponding nuts on the collector (see picture no.13) and tighten with bolts M6 (see picture no. 14 & 15)

Lift the collector and join the structure to the wall using the raw plugs and anchored bolts (see picture no. 16).



Picture No. 13



Picture No. 14



Picture No. 15



Picture No. 16

5. Recirculation

In case of installation with recirculation (see drawing 1b), the sliding entrance door of "COLD AIR IN" must be "INSIDE".



SLIDING DOOR "INSIDE"

For a 100% fresh air the sliding door must be "OUT".



SLIDING DOOR "OUT"

For recirculation 50% and fresh air 50% the sliding door of "COLD AIR IN" must be in the "MIDDLE".

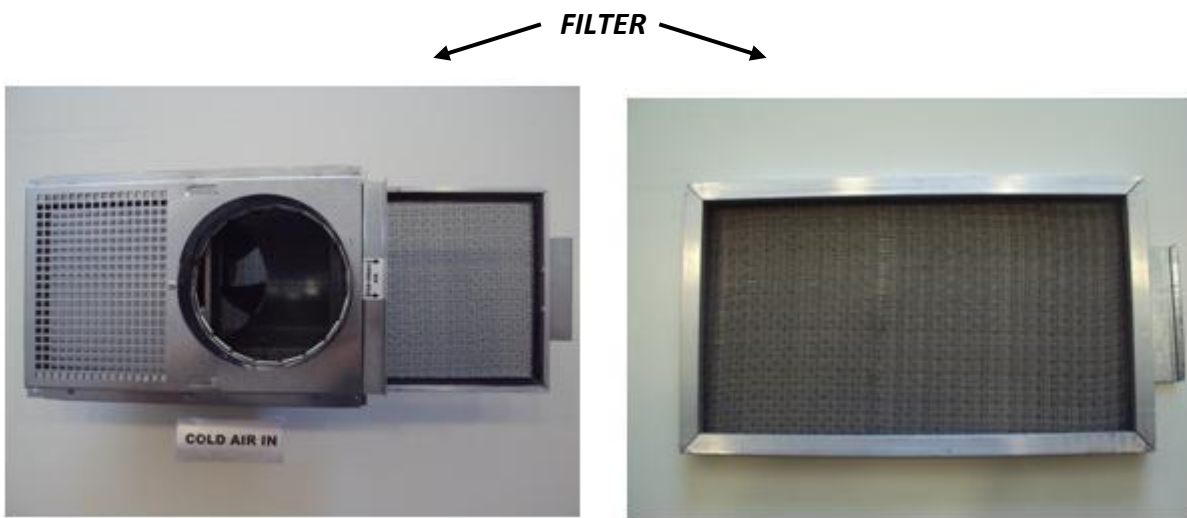


SLIDING DOOR MUST BE IN THE "MIDDLE"

6. Air Filter

At regular intervals depending on the purity of the environment but not more than 6 months, remove by hand the sliding filter, wash it with cold water to the tap by turning it from both sides and when it dries put it in its place.

The purity of the filter is important for clean air and for the good performance of the device.



7. Summer Season

The season that the heating is not needed, place the sliding door of the HOT AIR OUT at the "OUT" position.



SLIDING DOOR OF "HOT AIR OUT" AT THE OUT POSITION

In this position the hot air does not flow in the house but outdoors.

If we have recirculation then we can succeed ventilation of the area since the device sucks air from the inside of the room.

Alternatively, if you have purchased the optional cover, you can cover the entire device.

8. Room Thermostat

Optionally a thermostat can be connected on the AIRSOL in order to control the device from the room.

In case you want to connect the thermostat follow the procedure below:

Step 1

Open the cover of the electrical box at the back side of the collector.

Step 2

Disconnect the bypass cable from the cable connector.

Step 3

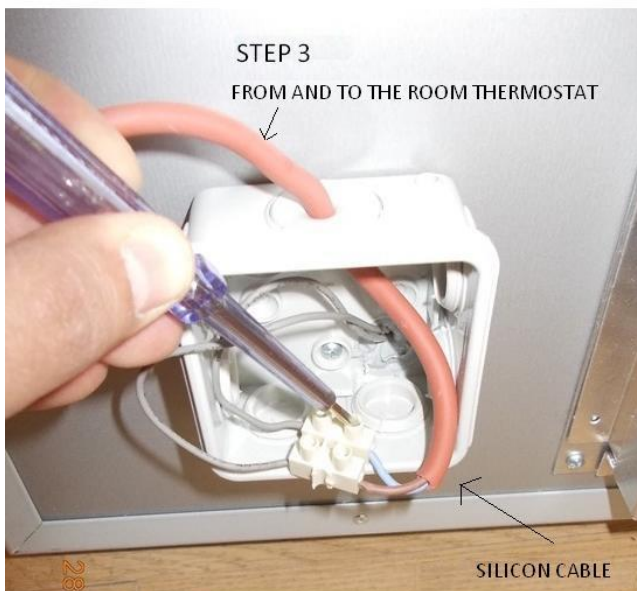
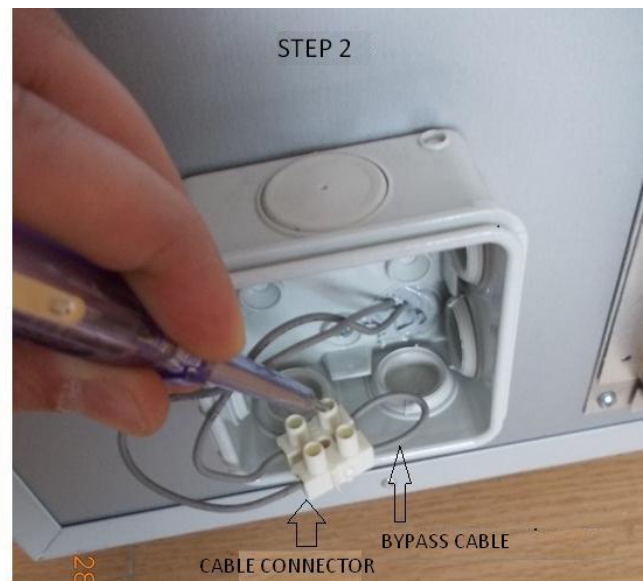
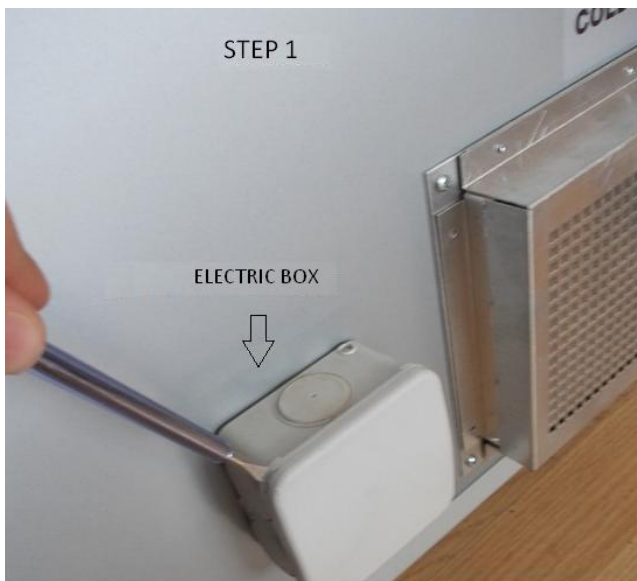
Connect to the cable connector the silicone cable from and to the thermostat.

Step 4

Close the cover of the electrical box.

Step 5

Connect the other end of the red silicone cable, following the schematic diagram that you will find at the electric box on the back of the collector.



9. General Instructions

The device delivers air into the room from 35° to 40° C higher than the entrance temperature in good sunshine and with the correct orientation. So, if it sucks 100% fresh air at 0° C temperature the warm air extracted in room will be about 35° C to 40° C. If the temperature of fresh air is 10°C the warm air extracted in space will be at a temperature of 45° to 50° C.

If we have installation with recirculation and sucks air of 20° C temperature, then the warm air will be extracted in space about 55° to 60° C.

The air collectors AIRSOL 10 & AIRSOL 20 are intended for either cottage houses or warehouses, or for permanent residence, office or other space.

For cottage house or warehouse the main target is to maintain the room slightly warm and dry while the air is renewed so that we avoid the smell of closure and mold. In this case the AIRSOL 10 is sufficient for a room up to 30-40m² and the AIRSOL 20 is sufficient for a room of 40-60m² and the AIRSOL 35 is sufficient for a room of 50-80m². The installation with a 100% fresh air is recommended.

For permanent residence or office or any other place the target is to save energy for heating on winter. So, for savings from 50% to 80% and more the AIRSOL 10 is sufficient for space 10-20m² and the AIRSOL 20 for space 20-30m² and the AIRSOL 35 for space 30-40m².

10. Care and Maintenance Program

- The collectors should be subject to periodic visual inspections. If it appears that excessive dirt has been accumulated on the transparent cover of the collectors, then it must be cleaned. This operation should take place during the morning, before 10:00 am or in the afternoon after the 18:00 pm, checking before that the collectors are not too hot. Otherwise, there might be a risk of damaging the collector, (especially when using a hose),
- If for some reason the collector's cover breaks, it should be replaced immediately. Otherwise, the interior of the collector may deteriorate due to rain, humidity or dirt.
- The support of solar collector is made of aluminium profile. As a precaution, verify the fixations to the tile or flat roof.
- Early in the morning, before starting the operation, condensation of humidity contained in the air will be deposited on the inside of the transparent cover. This is a normal procedure and it will disappear after the device starts working.
- Clean the air filter periodically as mentioned in paragraph 6 (Air-filter).

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