



EarthSaveProducts
Renewable Energy Solutions



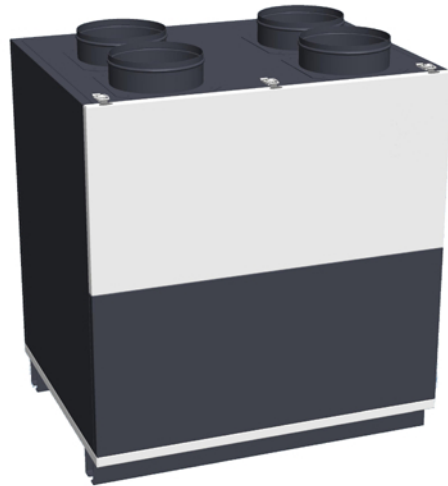
Technical of ECOCENT AIR

Mechanical Ventilation Heat Recovery
Combined Heating & Cooling System

Model

ESP ECOCENT AIR MVHR-300V

ESP ECOCENT AIR MVHR-400V



Attention

Please read this manual carefully before using the equipment
EarthSave Products Limited

Safety Considerations-----	3
Unit Specifications-----	4
Dimensioned Drawings-----	4
Wiring Diagrams-----	5
Installation Considerations-----	6 to 8
Controller Introduction -----	9 to 13

1. Safety marks contained in these instructions



1. If the safety precautions marked by this symbol are not complied with, injuries to persons may be caused.
2. If the safety precautions marked by this symbol are not complied with, damage to the machine or to its functions may be caused.

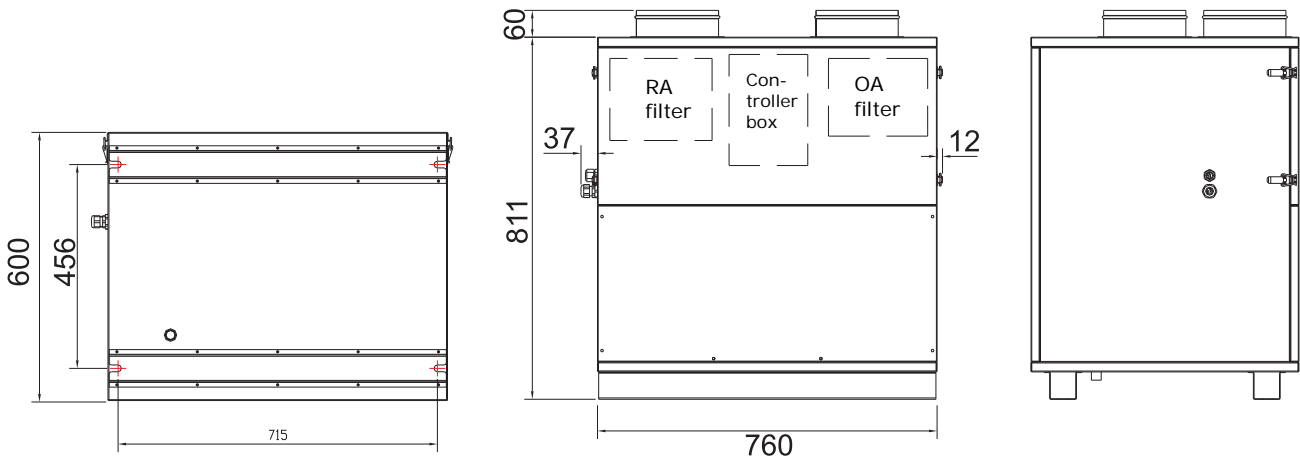
2. Please read the label on the machine carefully

When abnormal conditions happen, like abnormal noise, smell, smoke, temperature rise, leakage or fire, please cut off power immediately. And contact our customer service department or distributor. Don't repair it by yourself. Please contact fire and rescue department if necessary.

3. For your safety, please read carefully the cautions before installation or use

- Strictly follow the instructions and safety attentions before installation and usage.
- All the electric works and piping should be done by qualified professionals.
- Keep the electrical parts away from water to maintain good electric insulation.
- Complete the grounding engineering according to the Electrical Safety Regulations to avoid leakage.
- The machine needs to be used with special power supply. Don't share the circuit with other equipment.
- The machine should be fastened at the place of flatness and good ventilation and keep proper distance with surrounding.
- Keep the machine away from fire and pollutant.
- It is not recommended to place the machine under the sun and rain.
- Keep the children away from the machine.
- Random change of specification by user is not allowed.
- It is prohibited to use the volatile solvent, volatile oil, toluene and other chemicals besides or above the machine.
- Make sure the machine doesn't put on the cable, and the cable is completely fine, in case of any danger of leakage and fire.
- Don't operate or repair the machine with wet hands.
- Under no conditions should users repair the machine by themselves. Only the professionals are authorized to repair the machine, it may result in personal injury or more serious problem to the equipment.
- Don't wash the machine directly with water or cleanser. Need to scrub by cloth with water or mild detergent.
- For avoiding machine breakdown or any danger, it is prohibited to insert objects into the air outlet.
- Users could not modify or repair the power wire.
- It is prohibited to put anything on the machine, in case it falls down during the operation of the machine and cause danger.

HPERV-300/V2, HPERV-400/V2 Fresh Air Heat Pump (Air conditioner)



Specifications	Unit	HPERV-300/V2	HPERV-400/V2
Rated cooling capacity	W	2000	2300
Rated heating capacity	W	2500	2800
Rated cooling power	W	550	630
Rated cooling current	A	2.6	3.0
Rated heating power	W	610	685
Rated heating current	A	2.9	3.3
Maximum operating power	W	750	800
Maximum operating current	A	3.6	3.8
Power type	/	220V~50Hz	220V~50Hz
Fresh air/Exhaust air capacity	m3/h	300/220/150	400/320/240
External static pressure	Pa	80	80
Noise	dB(A)	35	37
Outlet dimension	mm	184	184
Condensation drainage dimension	inch (BSP)	1/2"	1/2"
Machine overall dimension (length/with/height)	mm	810*600*870	810*600*870
Packing dimension (length/width/height)	mm	866*662*986	866*662*986
Net/Gross weight	Kg	92/110	92/110
Refrigerant	/	R410A	R410A

Test conditions:

Heating conditions: Ambient dry bulb / wet bulb temperature 7°C/6°C

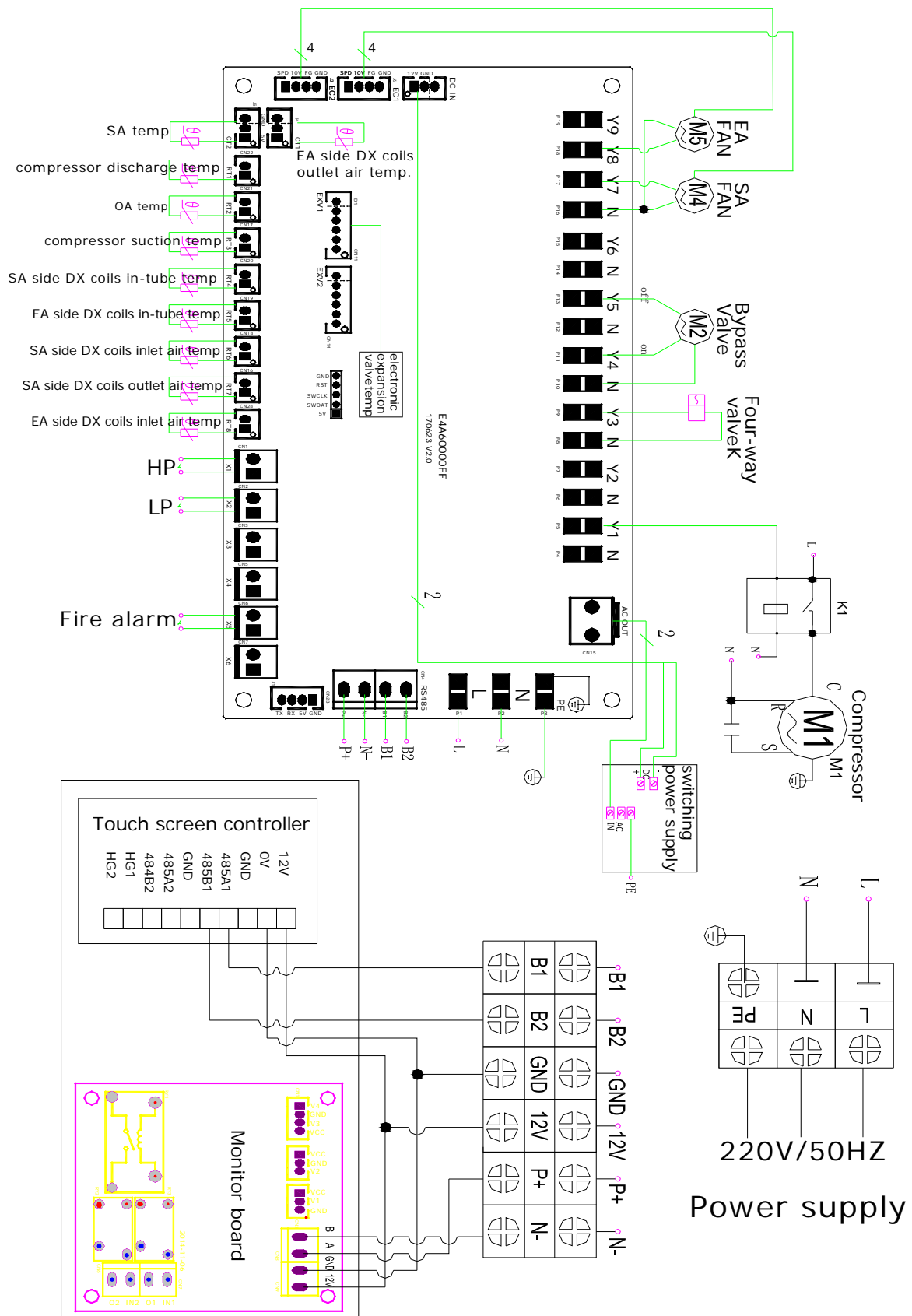
Room dry bulb / wet bulb temperature 20°C/15°C

Cooling conditions: Ambient dry bulb / wet bulb temperature 35°C/24°C

Room dry bulb / wet bulb temperature 27°C/19°C

Fresh Air Heat Pump only handles fresh air.

Control System Wiring Diagram



- 1) Wiring should be done by professional people. Power supply 1-1.5mm², other wires 0.5-0.75mm²
- 2) Wires of the controller and monitor board should be shielded twisted pair wires

Installation site

- A. Should be capable of providing sufficient installation and maintenance space.
- B. Should be no barrier in the inlet and outlet where would avoid the strong wind.
- C. Should be dry and well ventilated.
- D. Should have even supporter and strong enough to bear the weight of the machine, where the machine can be installed horizontally, creating no extra noise and vibration.
- E. Should be where the neighbor can't be disturbed by running noise and discharge air.
- F. Should be where no flammable air leakage.
- G. Should have easy access for piping and electrical connection.

Attention

1. Cautions for installation

Don't install the system at the following places, which may cause system failure (please consult our service team if necessary).

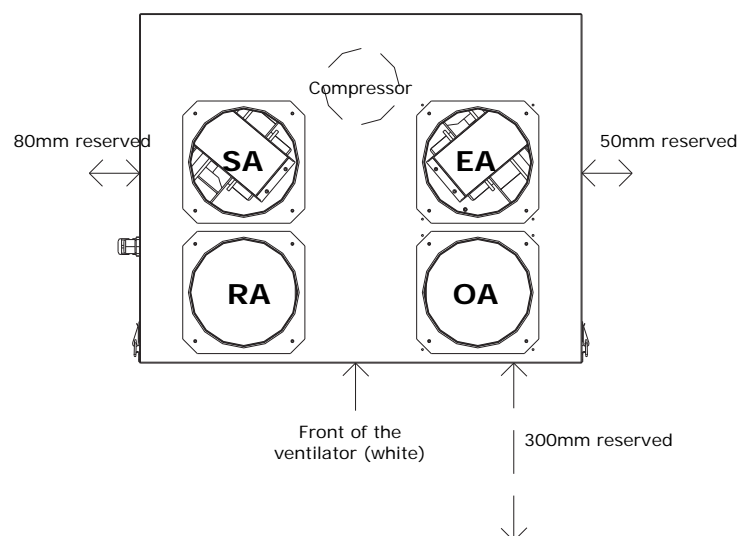
- A. Places with mineral oil like cutting machine oil
- B. Places with salty air
- C. Places with corrosive gas, such as sulfur.
- D. Places with fluctuant power supply and voltage
- E. Vehicle or cabin
- F. Places like kitchen where full of oil ,Places with strong electromagnetic waves
- G. Places with flammable gas and materials
- H. Places with acidic or alkaline gas
- I. Other special places

2. Attention before installation

- A. Choose the correct transportation way.
- B. Keep the original packing during transportation.
- C. If the machine is installed on the metal base of the construction, the electrical insulation must be done well and strictly according to the technical standards of electrical equipment.

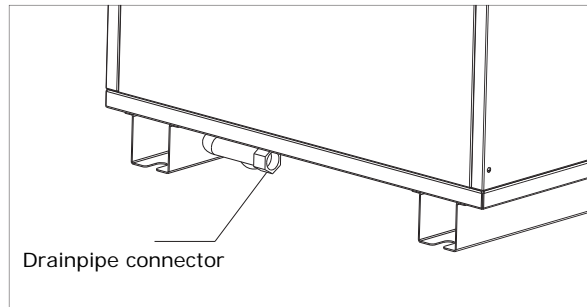
3. Installation attention

Please reserve enough room for maintenance, refer to below picture

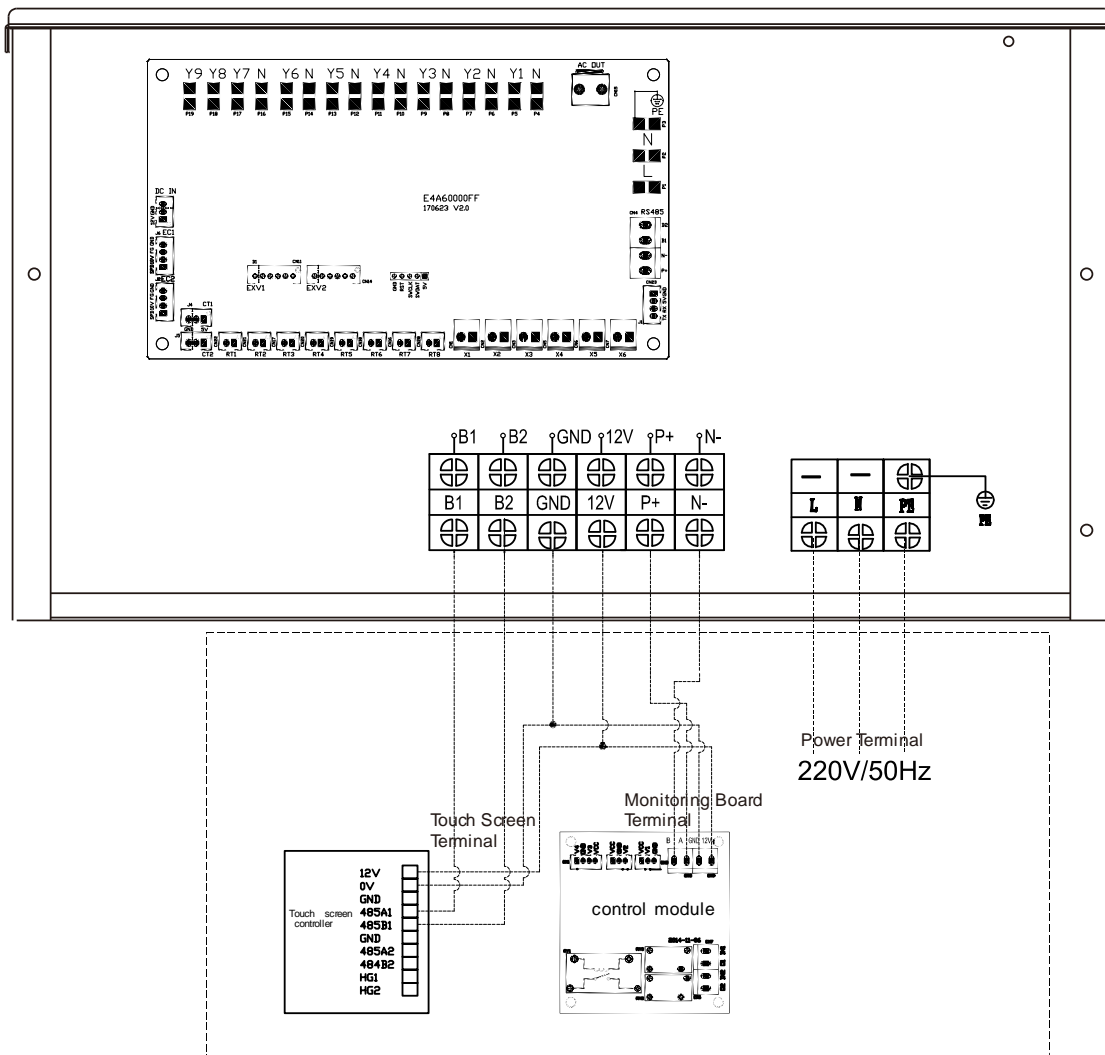


4. Installation of drainpipe

Connect the soft pipe to the drainpipe connector (1/2"), gradient should be over 1/100, to avoid the condensate water on surface of the drainpipe, the drainpipe should be thermal insulated.



5. Electric wiring



Note:

- 1) The dotted line area wiring connection should be operated by a professional.
- 2) The wiring for connecting monitoring board, touch screen with terminals should be used with shielded wire to prevent interference.

6. Power cord requirement


Type No.		HPERV-300/V2, HPERV-400/V2
Power cord	Specification	3 X 1.5 mm ²
	Model No.	60245 IEC57(YZW)

7. Grounding requirements

- 1) It is a Class I appliances, be sure to take a reliable grounding.
- 2) The yellow-green wire is the grounding wire. It must not be used for other purposes and can not be cut. Do not use self-tapping screw to prevent the risk of electric shock.
- 3) Grounding resistance should be in line with the national standard requirement of GB17790.
- 4) User must provide a reliable grounding power supply. Please do not connect grounding wire to the places like Water pipe, gas canisters, drain outlet and other unreliable places recognized by professionals.

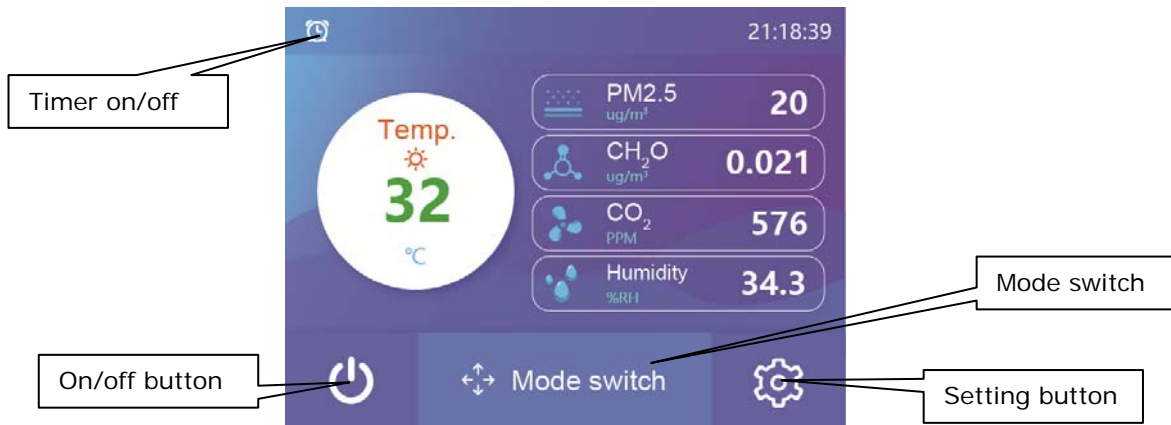
8. User's attention

- Set appropriate indoor temperature The indoor temperature should not be set too high or too low, to make most people feel comfortable. Recommended temperature for cooling is 26-28°C, and 18-23°C for heating.
- The window and door should be closed, otherwise, it will affect the effectiveness of air conditioning.
- Equipment like TV, radio and Hi-Fi etc. should be at least one meter away from the indoor machine, otherwise, they will interfere the image and make noise.
- The power of the machine should be shut down if it is not used for a long time. To protect the machine, the power should be connected for 24 hours before it is used. If it is shut down in winter, please clean the machine and dry it. For dustproof, please cover the machine, open the outlet valve to drain out the water in the heat exchanger and pipes, to prevent frosting. It is recommended to inject antifreeze into the pipes.
- The window should hang up curtains or shutters, to avoid the sun shine directly to the house.
- Dry articles should not be put under the machine, because when the ambient temperature is high or the drainage is blocked, the machine may drip.

 Warning	<p>If any abnormality is found (like scorching smell), shut down the power, and contact our service team, if it is still using in that case, the machine may be damaged and cause electric shock or fire, maintenance can only be conducted by professional. The power should be disconnected before touching the wiring device</p>
	<p>The machine can be cleaned only when the power is disconnected, otherwise, it may cause electric or injury. Don't wash the machine with water, or it may cause electric shock, Stand on a firm platform when cleaning ceiling air conditioner</p>

1. Homepage

Fresh Air Heat Pump is with intelligent touch screen controller to monitor indoor air quality (IAQ), including index of indoor temperature, humidity, VOC concentration, CO₂ concentration and PM2.5 value.



On/off button, to turn on or turn off the ventilator.

Mode switch, to switch heating mode, cooling mode, ventilation mode and auto mode.

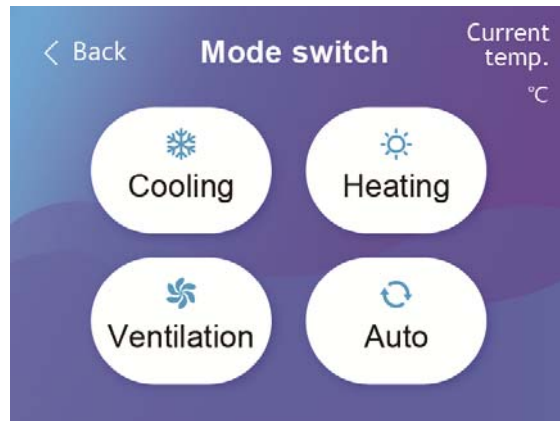
Setting button, to set the parameters of the ventilator.

Timer on/off, after activate the timer on/off function, a "CLOCK" displayed on the top left corner.

When there is system error, there will be messages displayed on the top left corner.

2. Mode switch

Press Mode switch button to enter the modes setting as below

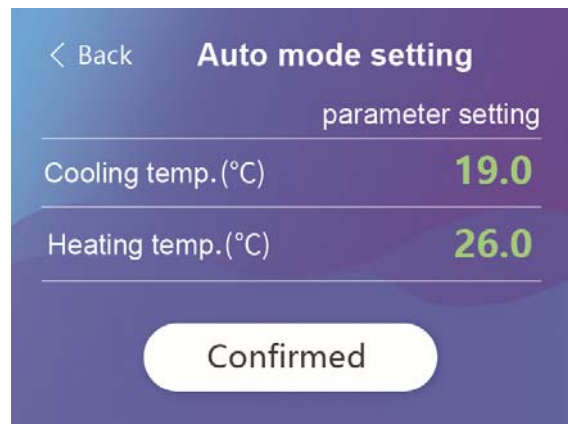
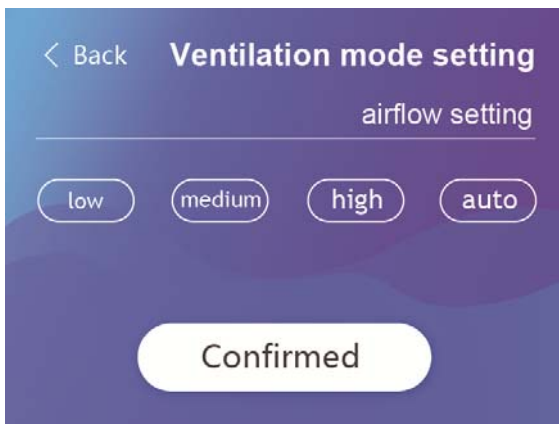
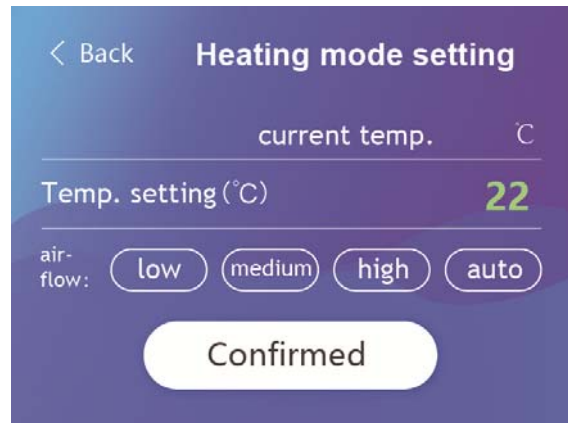
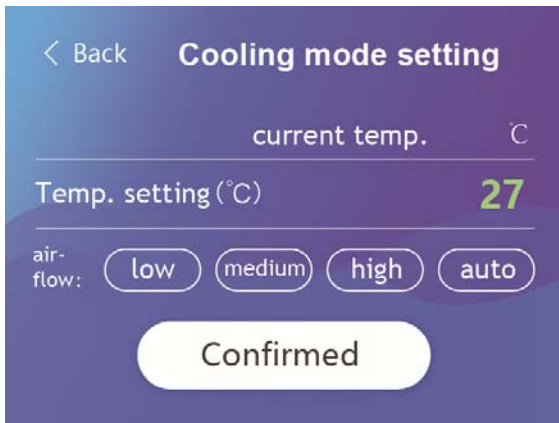


Cooling mode, to set the cooling temperature and fan speed, then to confirm.

Heating mode, to set the heating temperature and fan speed, then to confirm.

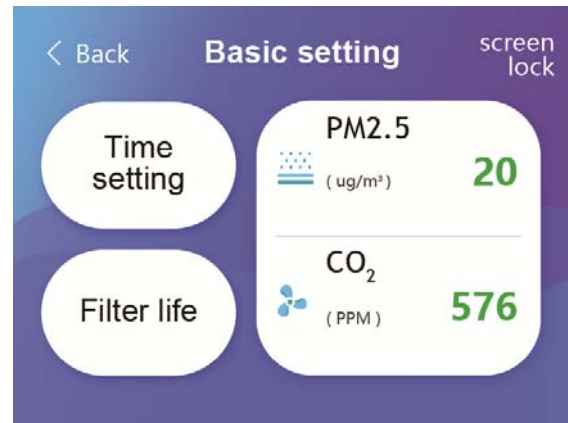
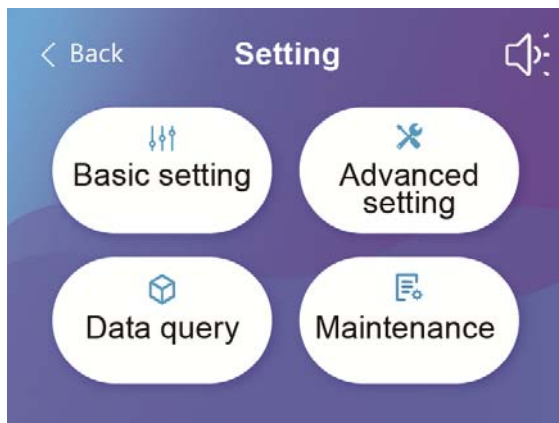
Ventilation mode, to set the fan speed, then to confirm.

Auto mode, to set cooling and heating temperature, then to confirm.



3. Setting button

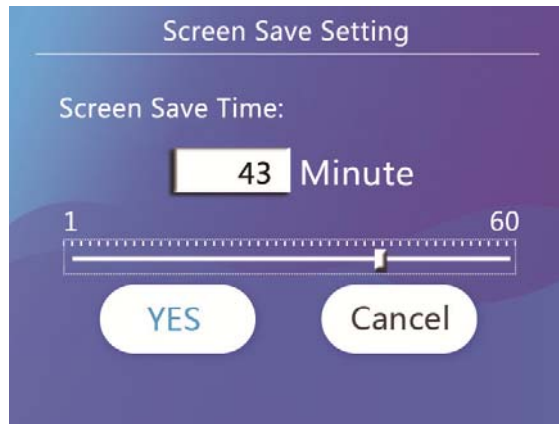
Press setting button to enter basic setting, advanced setting, data query or maintenance setting.



A) Press basic setting to enter the basic setting page.

Under basic setting page, press PM2.5 or CO2 value to set the targeted value, these 2 values will influence the SA fan and EA fan speed after setting temperature achieved (compressor off).

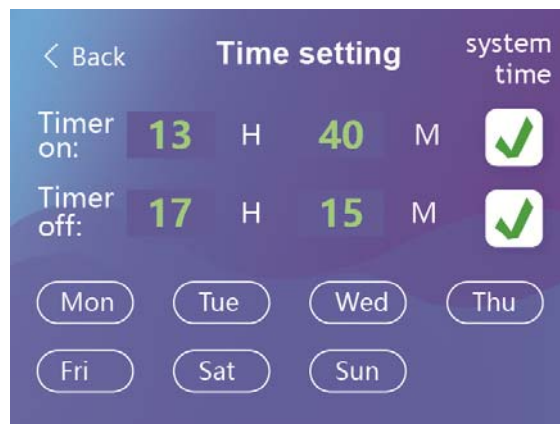
Press screen lock at the top right corner to enter the screen lock time setting.



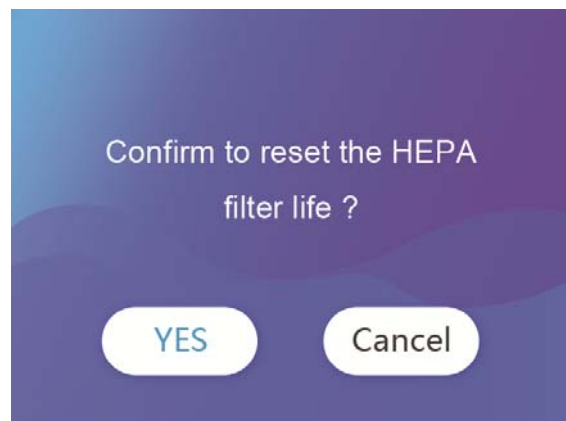
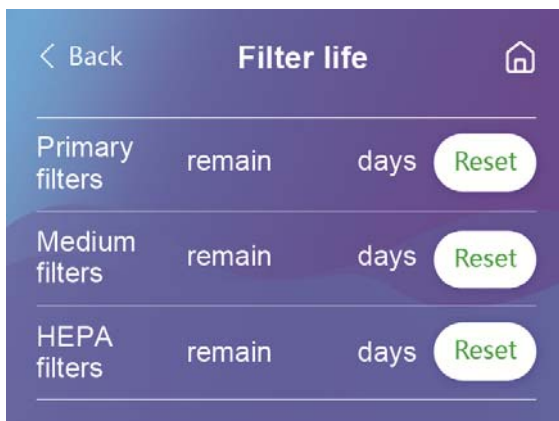
Press time setting to enter the system time setting and timer on/off setting

a) press system time at the top right corner to set the system time

b) after setting the timer on and timer off time, then to click the "✓" to activate timer on/off

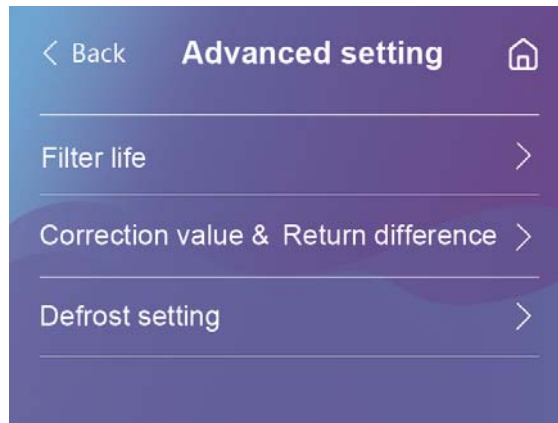


Press filter life to check the filters life, after cleaning or replacing the filters then can reset the life time.

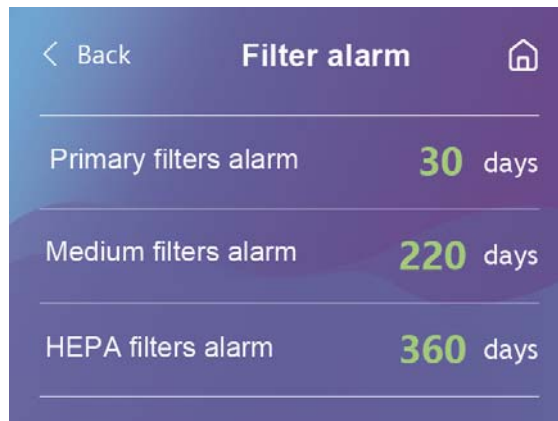


B) Press advanced setting and enter the password 3333 to turn to advanced setting page. Through advanced setting to set filter life, correction value and return difference value, also the defrost value.

 **Attention** **ADVANCED SETTING ONLY FOR ADMINISTRATOR, INCORRECT SETTING MAY INFLUENCE THE VENTILATOR NORMAL WORK.**



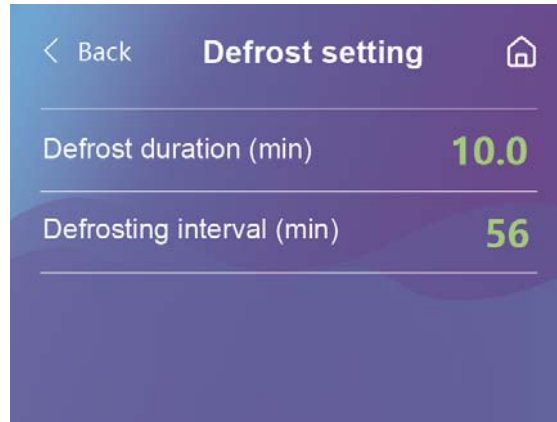
Press filter life to set different filters life alarm



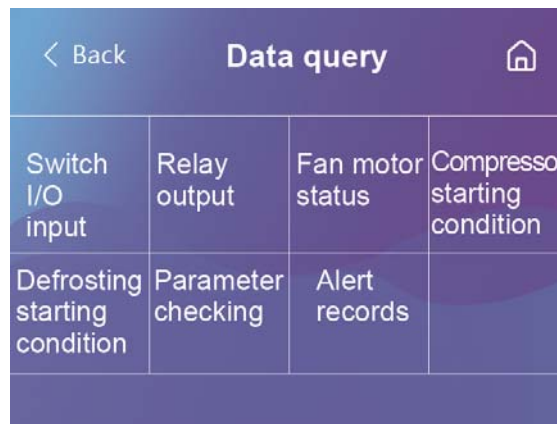
Press correction value & return difference to check and set the value

Correction value & return difference	
temp. correction value (°C)	2.0
humidity correction value (%)	0.0
CO ₂ correction value (PPM)	0
temperature return difference (°C)	2.0
PM2.5 return difference (µg/m3)	10
CO ₂ return difference (PPM)	100

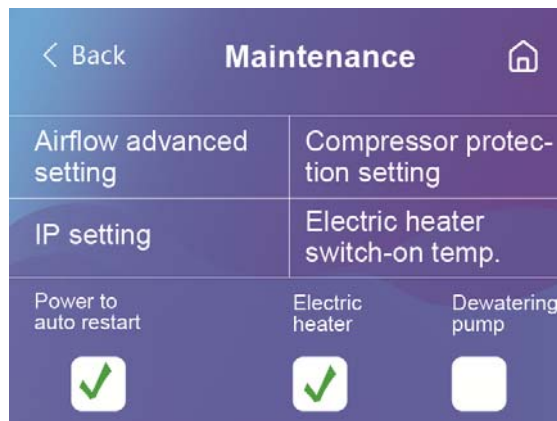
Press defrost setting to enter defrost duration time and defrosting interval time setting.



C) Press data query to enter the data checking, it is for administrator ONLY, if there is error displayed on the homepage, then can enter this page to check the details, password is 5555, if the ventilator works fine, then no need to enter this page.



D) Maintenance page, **THIS PAGE IS FOR DEVELOPER OPTIONS, ANY NOT PROFESSIONALS ARE NOT ALLOWED TO ENTER THIS PAGE, INCORRECT SETTING WILL RUIN THE VENTILATOR SYSTEM, PLEASE CONTACT THE MANUFACTURE FOR THE PASSWORD IN CASE OF NECESSARY.**





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