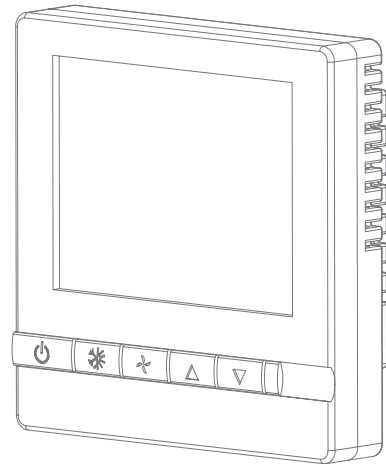


# AV-TTW5SC + AS-WSC02

## Instruction Manual

### Single Room Energy Recovery Ventilator Controller

AS-WSC02



CE

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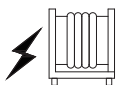


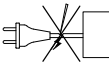

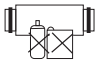

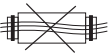
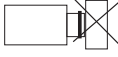

- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised to ensure that they do not play with the appliance.
- Whether the fan is intended for mounting in outside windows or walls.
- That the fan is to be installed so that the blades are more than 2,3 m above the floor (for fans intended to be mounted at high level).
- That precautions must be taken to avoid the back-flow of gases into the room from the open flue of gas or other fuel-burning appliances (for duct and partition fans).

### Symbol Used in The Manual

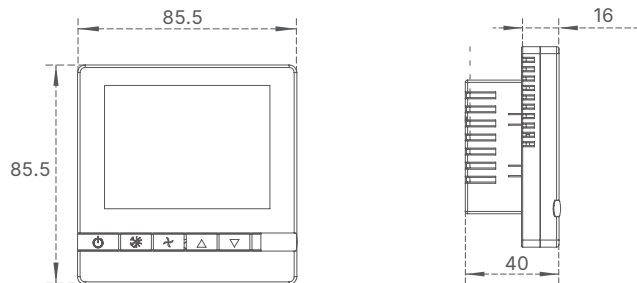
	<b>WARNING!</b>		<b>DO NOT!</b>
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### Ventilator Installation Safety Precautions

	The ventilator must be disconnected from the power supply before the installation or repair operation.		The ventilator must not be operated outside the temperature range specified in the user's manual or in aggressive or explosive environment.
	Do not use damaged equipment or conductors to connect the ventilator to power.		While installing the ventilator, follow the safety regulations specific to the use of electric tools.

	Unpack the ventilator with care.		Use the ventilator only as intended by the manufacturer.
	Do not place any heating devices or other equipment in close proximity to the ventilator power cord.		Disconnect the ventilator from the power supply before maintenance.
	Do not touch the controller or the remote control with wet hands. Do not carry out the ventilator maintenance with wet hands.		Do not damage the power cable while operating the ventilator. Do not put any objects on the power cable.
	Do not allow children operate the ventilator.		Keep explosive and inflammable products away from the ventilator.
	Do not clean the ventilator with water. Protect the electric parts from water ingress.		Do not open the operating ventilator.
	Do not block the air duct when the ventilator is on.		Do not direct airflow from the ventilator onto the open flames or candles.

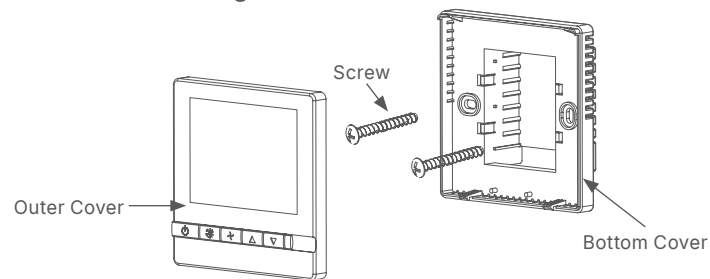
## Dimensions (mm)



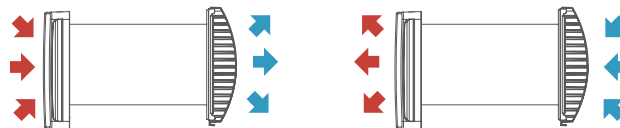
## Technical Parameters

Voltage (V)	100-240
Frequency	50/60HZ
Rated Input Power (Single Unit) (W)	4.3
Rated Input Power (Dual Units) (W)	8.2
Rated Input Current (Single Unit) (A)	0.02
Rated Input Current (Dual Units)(A)	0.04
RPM (r/min)	1200/1500/1800
Noise (dBA)	32.7
Airflow (L/M/H) (CMH)	20/40/50
Weight (g)	170

## Installation Drawing



## Operation Modes



**Ventilation Mode:** The ventilator runs in exhaust or supply mode at a set speed. One machine in air intake and another one in exhaust mode: one runs in the supply mode and the other in exhaust mode.

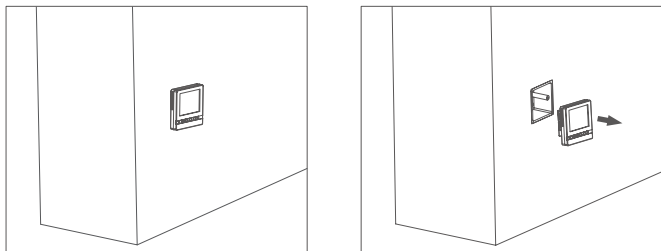
**Regeneration Mode:** The ventilator runs in two cycles of 75 seconds each, to provide heat and moisture regeneration.

**Interval 1** The warm polluted air is extracted from the room and goes through the ceramic regenerator, which gradually absorbs heat and moisture. After 75 seconds the ventilator switch to air supply mode.

**Interval 2** The fresh and cold outdoor air goes through the heat regenerator and absorbs the accumulated moisture and heat after 75 seconds, when the energy regenerator gets cold, the ventilator switches to the exhaust mode.

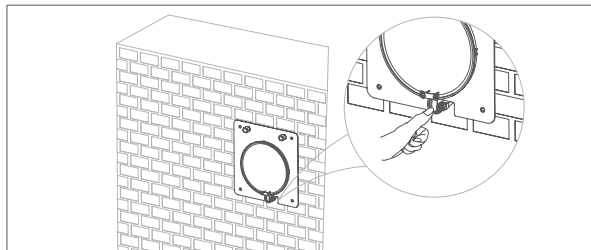
## Controller Installation

- 01** Insert the controller into the pre-installed standard 86\*86mm electrical box and test for compatibility.

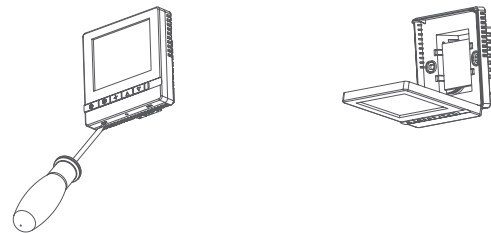


## **02** Installation and wiring

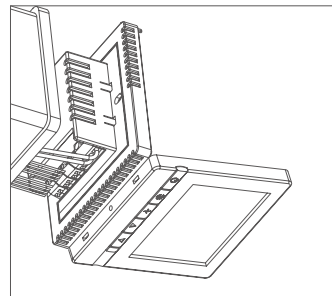
- (1) Refer to the wiring diagram figure 3, connect the wires of the ventilator to the pre-installed cable of the controller and put inside the wall. For further installation of the ventilator, please refer to the ventilator's manual.



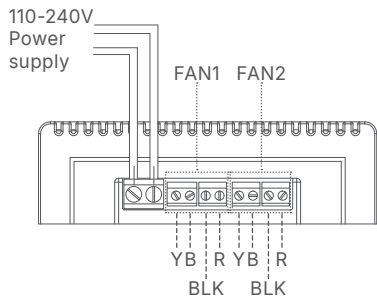
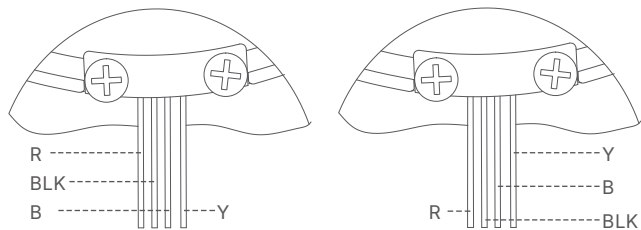
- (2) Remove the outer cover and bottom cover of the controller. Gently press in the clips at the lower end of the housing, use a straight screwdriver or other tools to pry it open. Be careful during disassembly to avoid damaging the internal circuit components. Do not disconnect the wiring connections in the internal circuit area.



- (3) Connect the pre-installed cables through the standard 86\*86 mm electrical box to the controller's 12V power output terminals, and connect the 220V power supply cable to the 220V power terminals on the controller.



Ensure that the diameter of the power supply wire is above 0.75 mm<sup>2</sup>, and the power supply voltage is 100-240V, frequency is 50-60HZ)

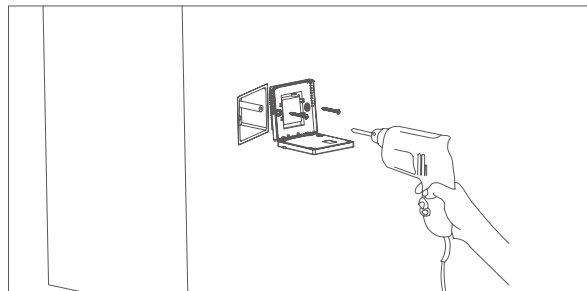


**Note:** The wiring terminals of the ventilator should correspond with the terminals on the wired controller (e.g., 12V+ of the ventilator should connect to 12V+ terminal on the controller).

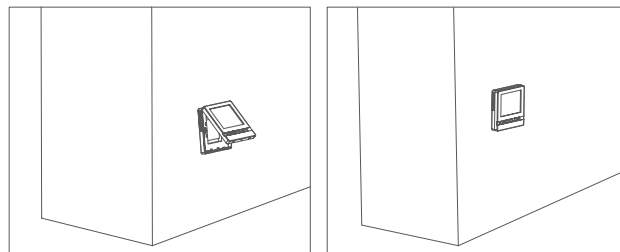


**Warning:** Be sure to disconnect the power supply when making wiring and this should be done by professionals.

**03** Fixed the bottom cover to the 86\*86 mm electrical box by screws.

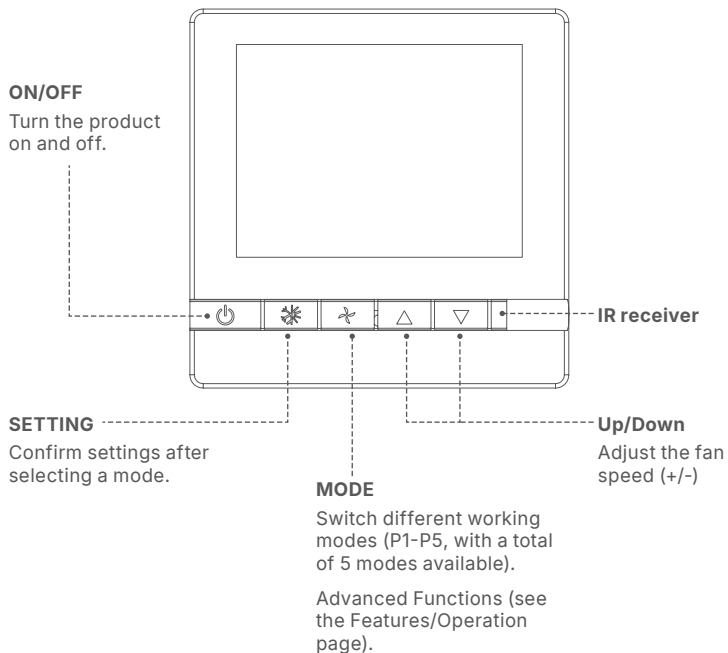


**04** Install the controller's outer cover to the bottom cover, pay attention on the four clips on the outer cover, ensuring correct direction during installation.

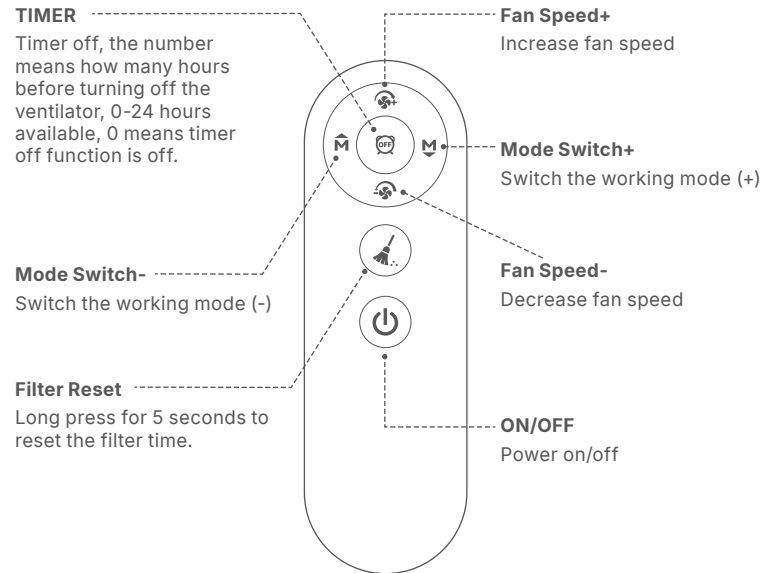


## Function Description

### Using the wired controller



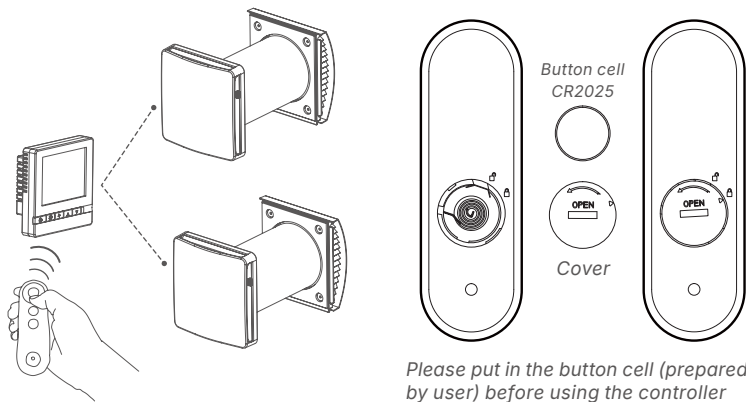
### Using the remote control



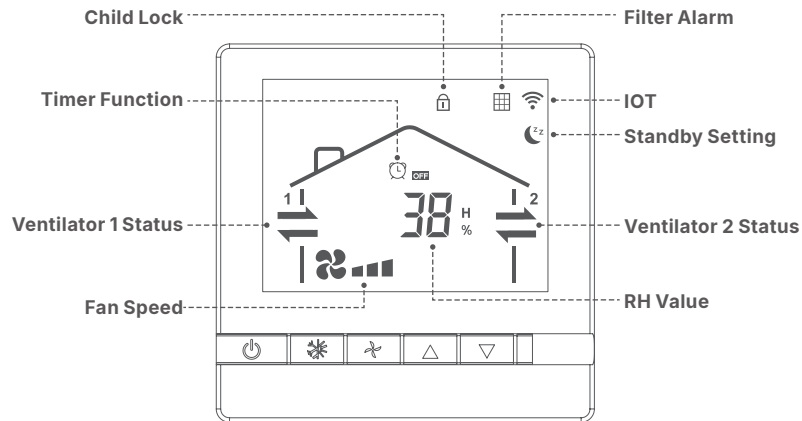
**Note:** The remote controller is optional.

### This remote control uses infrared signals.


- (1) Before using the remote control, inset the battery into the remote control and screw the battery cover tightly.
- (2) After inserting the battery, screw the battery cover clockwise as shown until the cover triangle arrow indicates the locking pattern, which means it is locked ( please do not tighten the cover with your bare hands to avoid damage to your hands).
- (3) To remove the battery, turn the battery cover counterclockwise as shown in the picture until the triangle arrow of the cover indicates the unlocking pattern, that is, loose, then the battery can be removed.
- (4) Please store the remote control properly to prevent children from swallowing the batteries and causing accidents.
- (5) When controlling the device by remote control, the remote control shall be at the device head-on.



## Functions Introduction






### Child Lock

Long press the On/Off button  for 5s, the screen will display the child lock icon, then the setting is finished. There is no response of the controller during child lock state. Long press the on/off key for 5s again to remove the child lock, icon disappears on the screen, then the setting is finished.

### Backlight

After 30 seconds without operation, the LCD display light turns off, press any button to turn on the light again. When the light is off, the first button press only turns on the light, and the button operation is effective after the light is on.

## Mode Switching

In the main interface, press the Mode button  to enter the mode setting page, the screen displays the working mode of the ventilator. Then press the Up and Down button  to select the working mode. After selecting, press Setting button  to confirm and return to the main interface, or after 30s to return to the main interface without operation.

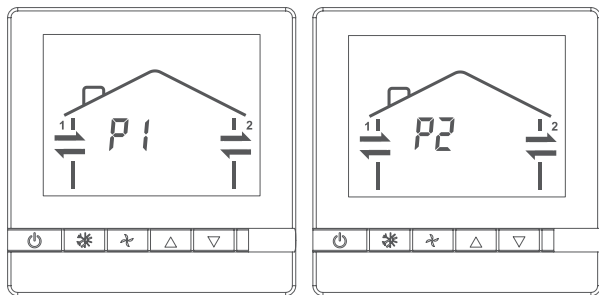
**P1:** Heat recovery mode (1# and 2# machines will switch between intake and exhaust air cycle after 75S, and the running direction is opposite).



**P2:** Exhaust air mode (1# and 2# machines are both in exhaust state).

**P3:** Supply air mode (1# and 2# machines are both in air intake state).

**P4:** 1# machine in airtake and 2#machine in exhaust mode.

**P5:** 2# machine in airtake and 1# machine in exhaust mode.







- Press the Mode button  to enter the working mode setting.
- Press the Up and Down buttons  to select the working mode.

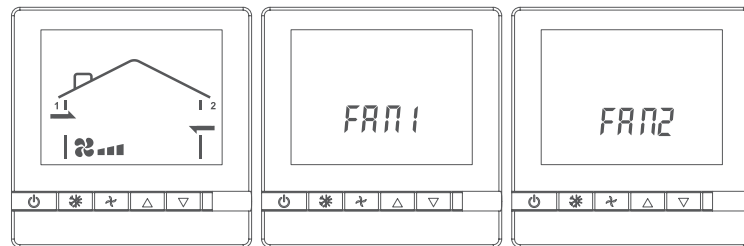
## Fan Speed Setting




In the main interface, press Up and Down  to adjust the fan speed.

## Ventilator Quantity Control







Choose to control one or two ventilators. In the main interface, long press the Mode button  for 5s to enter the secondary menu, and then by pressing the Mode button  shortly, switch to the ventilator quantity control mode "FAN", by the Up and Down buttons  to select the ventilator that needs to be controlled. ("FAN 0": control 2 ventilators together, "FAN 1": control the #1 ventilator, "FAN 2": control the #2 ventilator. After selection, press Setup button  to confirm and return to the main interface or 30s without operation to return to the main interface. This function is factory default to control both 2 ventilators together.


**Note:** If only connect 1 piece ventilator to the controller, then need to set the code to be FAN1 or FAN2 according to which connector on the controller is connected to, or the error is displayed.

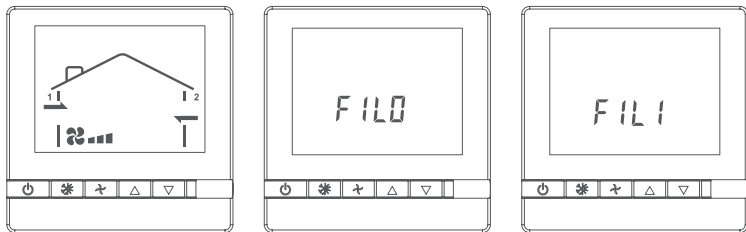






- Long press "Mode" button  for over 5s.
- After enter the secondary menu, shortly press "Mode" button  to switch the parameters.
- Use the Up and Down button  to set the value.

### Filter Reset Function






When the running time reaches 1080h, the filter icon  will light up to remind user to replace the filter. After replacing the filter, we can reset the filter time manually. In the main interface, long press the Mode button  for 5s to enter the secondary menu, shortly press the Mode button  again to switch to filter time setting. Use the Up and Down button   to adjust FIL0 to FIL1 then the filter time is reset. Press Setting button  to confirm and return to the main interface, or after 30s to return to the main interface without operation.

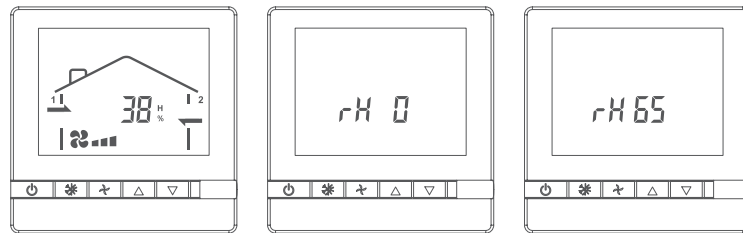
When the reset is finished, the icon  will flash continuously for 5s and then disappear, then the reset is finished.







- Long press "Mode" button  for over 5s.
- After enter the secondary menu, shortly press "Mode" button  to switch the parameters.
- Use the Up and Down button   to set the value.

### Humidity Control Function







In heat recovery mode, when the indoor humidity is 5% RH higher than the setting value, the ventilator automatically switches to exhaust air mode. Until the indoor humidity drops below the setting value, it returns to the previous mode. In the main interface, long press the Mode button  for 5s to enter the secondary menu, and then switch to the humidity control function by pressing the Mode button  again shortly. By the Up and Down buttons   to set the humidity value. Range from 50-95%, each setting is 5%, default value is 0 (means function off). Press Setting button  to confirm and return to the main interface, or after 30s to return to the main interface without operation.

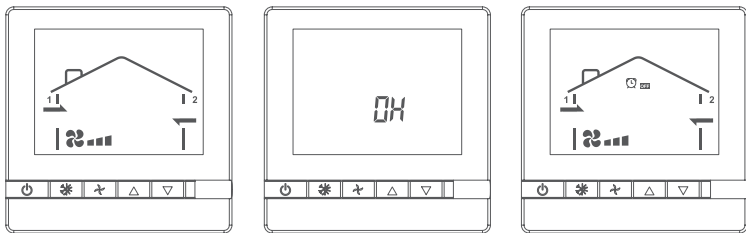





- Long press "Mode" button  for over 5s.
- After enter the secondary menu, shortly press "Mode" button  to switch the parameters.
- Use the Up and Down button   to set the value.

**Note:** The humidity value will be affected by the heat of the remote controller, which will cause the measurement accuracy to decrease. Therefore, the value is only for reference. Users can choose whether to enable the humidity control function according to their own situation..






### Timer Off

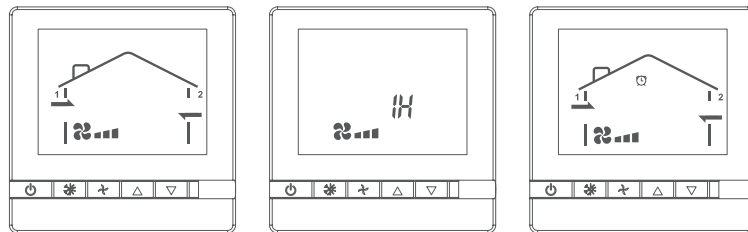
Set the ventilator turns off after 0-24 hours. In the main interface, long press the Mode button  for 5s to enter the secondary menu, and then switch to the timer off function by pressing the Mode button  shortly. Use the Up and Down button  to set the time (the default 0 means the timer function is turned off). Press Setting button  to confirm and return to the main interface, or after 30s to return to the main interface without operation. After setting, the main interface will show the timer icon + off icon  , indicating that the setting is complete.






- Long press Mode button  for over 5s.
- After enter the secondary menu, shortly press Mode button  to switch the parameters.
- Use the Up and Down button  to set the value.






### Customized Timing Operation


Set the ventilator a specific fan speed and run in a specific period (0-8h available), the ventilator will return to the previous working conditions when out of the setting specific time period. long press the Setting button  for 5s to enter Customized timing operation page, press the Mode button  to set the time(0-8h, if set to 0 means cancel this function), press the Up and Down button  to set the fan speed. After setting, press setting button  to confirm and return to the main interface, or after 30s to return to the main interface without operation. The timer operation icon  appears on the main interface, indicating that the setting is complete.

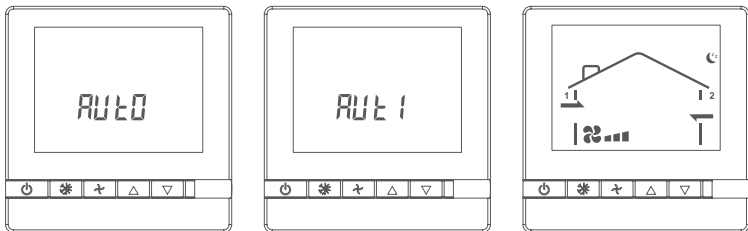






- Long press Setting button  for over 5s.
- After enter the customized timing operation., shortly press Mode button  to set the time.
- Use the Up and Down button  to set the fan speed.

## Standby Setting



Choose to turn off the ventilator or run at a super low power and low speed to keep a certain amount of fresh air supply in the room. In the main interface, long press the Mode button  for 5s to enter the secondary menu, and then switch to the standby setting function by pressing the Mode button  shortly. Use the Up and Down button   to set the function to be on or off (1 means to turn on the function, when the machine is switched off, the ventilator is still running continuously with super low power. Set to 0 means switch off this function, PS: this function is switched off by factory default). Press Setting button  to confirm and return to the main interface, or after 30s to return to the main interface without operation.

After the setting is completed, the sleep icon  appears in the main interface, which indicates that the setting is completed.



- Long press "Mode" button  for over 5s.
- After enter the secondary menu, shortly press "Mode" button  to switch the parameters.
- Use the Up and Down button   to set the value.

## Error Display EEE I

When the ventilator has abnormal fan speed/ fan stop, the icon will be displayed automatically. After troubleshooting, the error will be restored after restarting. To identify which one is in error when 2 ventilators connected by one controller, long press the Mode button  for 5s to enter the secondary menu, then press the Mode button  again to switch to the ventilator quantity control mode "FAN", to set the value to FAN 1. After restarting the system again, if the error restored, then Fan1 is fine, Fan 2 is in error. On the contrary, if to set FAN 2 the error restored, then Fan 2 is fine and Fan1 is in error, if by both setting FAN1 and FAN2 can not restore the error, then both fans are in error.

## IOT Networking

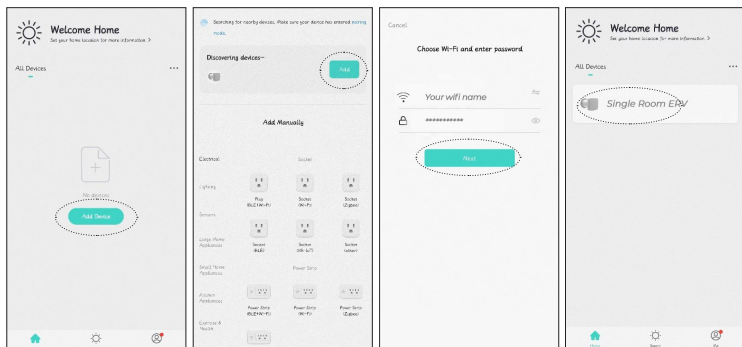
### App Download Instructions




Scan the QR code on the right to download the app, or search for "Smart Vent" in the Apple Store and Google Play Store to install the app, and then use the device's WIFI connection to control the device with the mobile app.

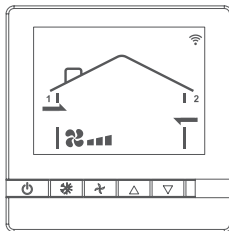
If you want to use the smart speaker voice control function, please scan this QR code to download the app. or search "smart life" in the Apple store and Google play store to install the app, download, and install using the device's WIFI connection. It's available for the mobile app to control the device and support Google and Alexa Smart speaker control function.



## IOT Networking Operation Steps



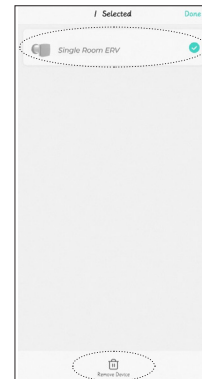
1. Before enabling IOT networking operation, please connect your cell phone to your home router WIFI, turn on the Bluetooth function of your cell phone, and ensure that the device and cell phone are within the WIFI signal coverage (make sure the router WIFI is enabled for 2.4G network).
2. Long press the Mode button and Up button   at the same time for 5s, the screen will show the wifi icon  blinking, then it will enter the wifi connection state.
3. Open the downloaded Smart Vent app, enter the operation page, click the add device box, and search for devices.
4. At this time the app receives the signal from the device, then clicks to add the device for network connection.



5. Click Add Device to find the WIFI signal of your home router, and make sure the WIFI name on the app is the same as the name of the WIFI connection to your phone, then log in with the WIFI password.
6. After successful WIFI connection, the device will be connected to the network, and after the connection is completed, you can enter the operation page to operate.

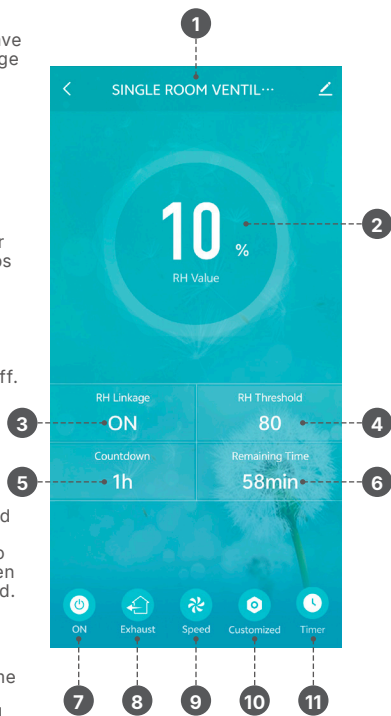
## WIFI Reset and Cancellation

1. Return to the app operation connection page, long press the device that needs to be disconnected, then the option to remove the device will appear at the bottom.
2. Click on the remove device option and confirm to successfully disconnect the device from the WIFI.



## IOT Networking Functions

1. ERV name. The app can connect multiple devices. Each device will have a different name, and user can change the device name freely.
2. Real time indoor RH concentration.
3. Humidity control function on/off.
4. Humidity value setting. In heat recovery mode, when the indoor humidity is 5%RH higher than the setting value, the ventilator automatically switches to exhaust air mode. Until the indoor humidity drops below the setting value, it returns to the previous mode.
5. Timer off. Set 0-24h to turn off the ventilator.
6. Remaining time for ventilator turns off.
7. Power ON/OFF.
8. Working mode switching.
9. Fan speed, total 3 speeds.
10. Customized timing operation. Freely set the ventilator a specific fan speed and run in a specific period (0-8h available), the ventilator will return to the previous working conditions when out of the setting specific time period.
11. IOT timer setting. Weekly timer function (7\*24hous), freely set the ventilator on/off, working mode and fan speed according to a specific time period. This function requests the ventilator must be always connected to the IOT.



## Troubleshooting

Fault	Possible reasons	Troubleshooting
The fan does not Start up.	No power supply.	Make sure that the ventilator is properly connected to the power and make any corrections, if necessary.
	The motor is stuck, or the impellers are clogged.	Turn the ventilator off. Troubleshoot the motor jam and the impeller dogging. Clean the blades. Restart the ventilator.
Low airflow.	Low fan speed setting.	Set higher speed.
	Filter, fan, or exchanger are dirty.	Clean or replace the filter, and clean the fan and the exchanger. For exchanger and filter maintenance, see the operation instruction.
Noise, vibration.	The impeller is dirty.	Clean the impeller.
	Loose screw Connection of the ventilator casing or the ventilation hood.	Tighten the screws of the ventilator or the outer hood.
WiFi connection failed.	The mobile phone is connected to the WiFi 5G network.	Please switch to the 2.4G frequency/network to connect.
	Wrong connected to public WiFi (such as WiFi in shopping malls, hotels, etc. That need to be registered and logged in).	Please set up the WiFi router correctly.
	The router has not yet set up an account and password.	
	The router is set to a higher security level.	
	You have exceeded the limit of devices that can be connected to the router.	
	Bluetooth on the mobile phone is off.	Enable Bluetooth on the mobile phone to improve the success rate of networking.

## Storage and Transportation Rules

Store the ventilator in the manufacturer's original packing box in a dry place.

The storage environment must be free of contain aggressive vapors and chemical mixtures that may cause corrosion, insulation, and sealing deformation. Use lifting equipment for handling and storage operations to prevent ventilator from damage as a consequence of failing or excessive vibration. Fulfill the handling requirements applicable for the applicable freight type.

Transportation by any type vehicle of allowed provided that the ventilator is protected against mechanical and weather damage.

Avoid any mechanical shocks and strokes during handling operations.