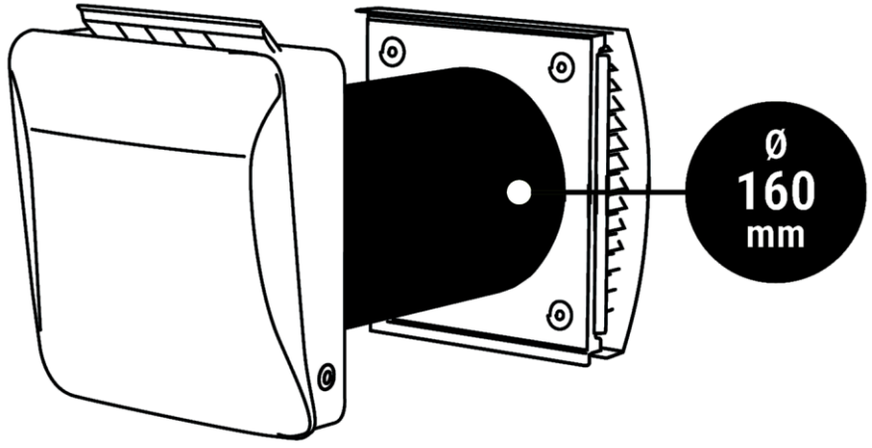
Single Room Energy Recovery Unit User Manual

RUCTS EVO BASIC



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▶ SAFETY REQUIREMENTS

- Read the user's manual carefully before operation and installation of the energy recovery unit.
- Installation and operation of the unit shall be performed in accordance with the present user's manual as well as the provisions of all the applicable local and national construction, electrical and technical codes and standards.
- The warnings contained in the present user's manual must be considered seriously since they contain vital personal safety information.
- Failure to follow the safety instructions may result in personal injury or unit damage.
- Read the manual carefully and keep it as long as you use the unit.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning the use of the appliance in a safe way and understand the hazards involved.
- Don't allow children to play with the appliance.
- Don't allow children to clean and maintain without supervision.
- If the power cord is damaged, it must be replaced by the manufacturer or its service agent or similarly qualified person in order to avoid a hazard.
- It's suggested to install the unit more than 2.1 m above the floor.
- Precautions must be taken to prevent the back-flow of gases into the room from the open flue of gas or other fuel-burning appliances.
- Exhaust fans may adversely a ect the safe operation of appliances burning gas or other fuels (including those in other rooms) by the backflow of combustion gases. These gases may cause carbon monoxide poisoning. After installation of an exhaust fan such as a partition fan or a duct fan the operation of an open flue gas appliances should be tested by a competent person to ensure that backflow of combustion gases does not occur.
- Don't recharge non-rechargeable batteries.
- Batteries must be inserted with the correct polarity.
- Remove used batteries from the appliance and safely disposed of.
- If the appliance is to be stored unused for a long period, the batteries should be removed.
- Don't short-circuit the power supply terminals.
- Take good care of the remote control to prevent children from swallowing batteries and cause accidents.

Instruction Manual for the user and the qualified installer

Symbol Used In The Manual

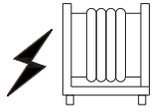
WARNING!

DO NOT!

Unit Installation Safety Precautions

The unit must be disconnected from the power supply before the installation or repair operation.

The unit must not be operated outside the temperature range specified in the user's manual or in aggressive or explosive environment.

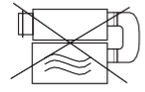


Do not place any heating devices or other equipment in close proximity to the ventilator power cord.

Do not use damaged equipment or conductors to connect the ventilator to power.

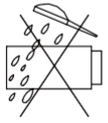
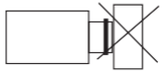
While installing the unit, follow the safety regulations specific to the use of electric tools.

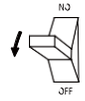
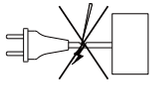
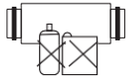
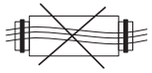
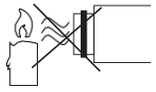
Unpack the vunit with care.



Use the unit only as intended by the manufacturer.

Unit Installation Safety Precautions

	Do not touch the controller or the remote control with wet hands. Do not carry out the unit maintenance with wet hands.
	Do not allow children operate the unit.
	Do not clean the unit with water. Protect the electric parts from water ingress.
	Do not block the air duct when the unit is on.

	Disconnect the unit from the power supply before maintenance.
	Do not damage the power cable while operating the unit. Do not put any objects on the power cable.
	Keep explosive and inflammable products away from the unit.
	Do not open the operating unit.
	Do not direct airflow from the unit onto the open flames or candles.

INTRODUCTION

This user's manual includes technical description operation, installation and mounting guidelines, technical data for the energy recovery unit.

Instruction Manual for the user and the qualified installer

USE

- The unit is designed to exchange air in apartments, villas, hotels, cafes, and other domestic and public buildings. The unit is equipped with a ceramic energy regenerator and a fan that supplies fresh air and extracts air with energy recovery.
- The unit is designed for through the wall mounting. The telescopic design of the fan allows its installation in walls from 280 mm to 470mm thick.
- The unit is designed for continuous operation always connected to power supply.
- The transported air must not contain any flammable or explosive mixtures, evaporation of chemicals, coarse dust, soot and oil particles, sticky substances, fibrous materials, pathogens, or any other harmful substances.

Installation and connection operations must be performed only by properly qualified personnel after the appropriate safety briefing.

The fan installation sites must prevent access by unattended children.

PACKING LIST

Unit	1 pc
Accessories bag	1 pc
Remote controller	1 pc
User's manual	1 pc
Packing box	1 pc

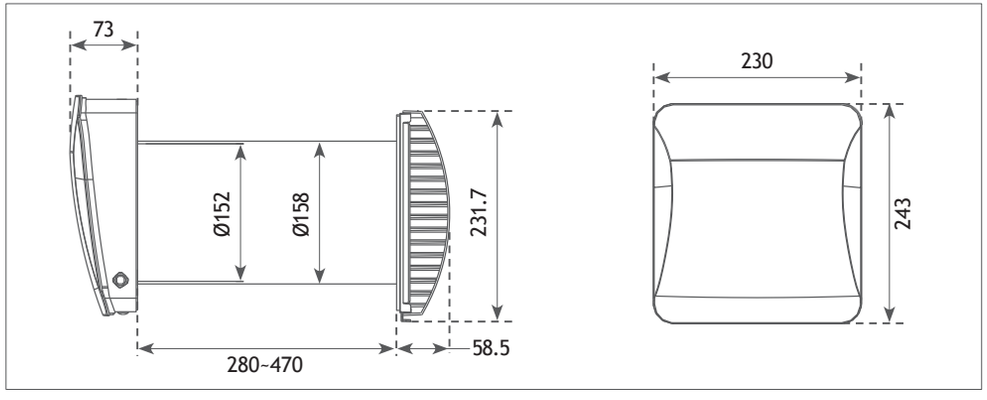
MAIN TECHNICAL PARAMETERS

- The unit is designed for indoor application with an ambient temperature ranging from -20°C to +50°C and relative humidity below 80%.
- ~~The unit is classified as a class II electric appliance.~~
- The unit is classified as a class II electric appliance
- The unit design is subject to continunous improvement, so some models may diverge slightly from the models described in this manual.

Description	Unit	Value
Voltage	V	100-240
Frequency	Hz	50/60
Input Power	W	4.7/5.6/6.5
Airflow (L/M/H)	m^3/h	30/50/60
Sound Pressure Level	dB(A)	18.9/25.2/28.7
Heat Recovery	%	up to 97
Air Duct Diameter	mm	158
SEC	-	Class A+
Mounting Type	-	Wall Mounting
Net Weight	kg	3.9

*Note: The airflow in supply/exhaust mode with F7 filter is about or 11.8/23.5/29.4 mc/h, and the relative parameters will be adjusted accordingly.

Unit Overall Dimensions (mm)



Instruction Manual for the user and the qualified installer

DESIGN AND OPERATION

- The unit consists of a telescopic air duct with adjustable length regulated by the position of the inner air duct inside the outer air duct, the ventilation unit, and the ventilation hood.
- Prefilter and the ceramic energy regenerator are located inside the inner duct. The filters are designed to purify supply air and prevent foreign objects from ingress into the regenerator and the fan.
- The ceramic energy regenerator extracts energy from exhaust air to warm up or cool down supply air.
- The regenerator is equipped with a pull cord inside to facilitate its withdrawal from the unit. The regenerator is installed on an insulation material which is used as a sealant as well.
- The unit is available to be installed from the inner side of the wall.

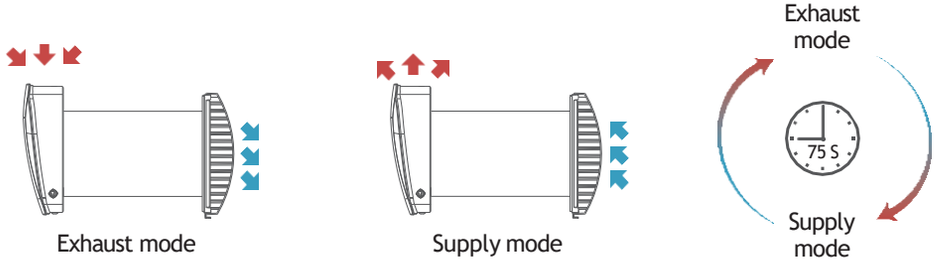
Operation Modes

Supply/Exhaust Mode: The unit operates in supply air or exhaust mode at the set speed.

Regeneration Mode: The unit alternates between supply and exhaust air every 75 seconds to provide heat and moisture regeneration. Consider the working principle in winter as an example.

Interval 1: 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 switches to air supply mode.

Interval 2: Fresh and cold outdoor air goes through the heat regenerator and absorbs the accumulated moisture and heat. After 75 seconds, when the energy regenerator cools down, the ventilator switches to the exhaust mode.

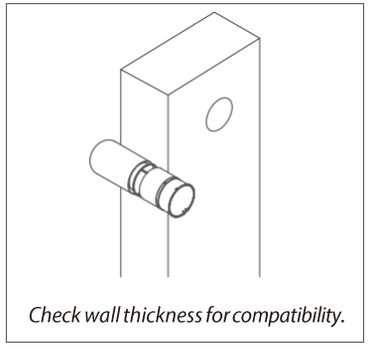


CAUTION!

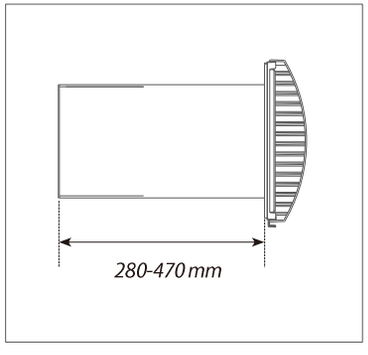
Read the user's manual before installation the unit To prevent room dust deposition and accumulation, the unit must not be installed in places where the air duct may be blocked by the blinds, curtains, drapes, etc. Meanwhile, curtains might obstruct normal air flow in the room, making unit operation inefficient.

▶ INSTALLATION INSTRUCTIONS

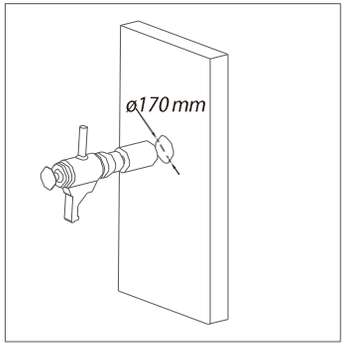
1. Confirming that the wall thickness is compatible with the product, insert the outer duct into the wall and ensure that the air inlet/outlet is correctly oriented downward.

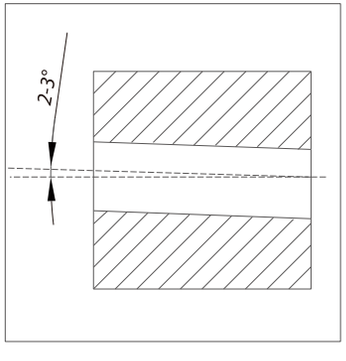


Check wall thickness for compatibility.

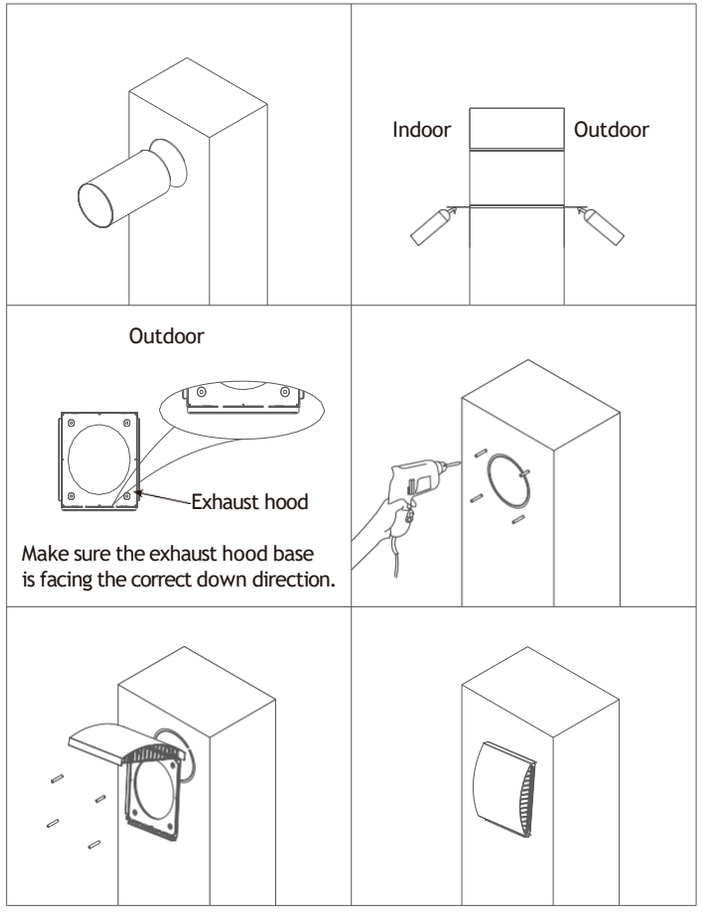


2. Drill a 170mm hole in the wall with a slight downward slope. And ensure at least 50cm clearance from the hole edge to the ceiling.





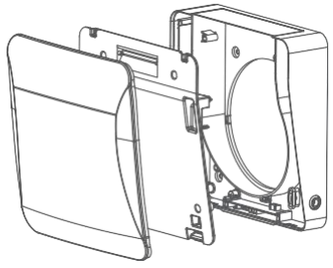
Instruction Manual for the user and the qualified installer



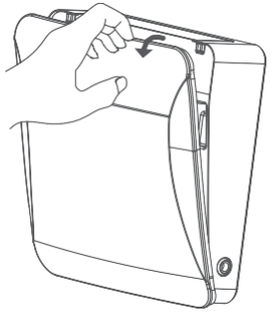
3. Use PU foam to fill the gap between the PVC pipe and the wall.
4. Take out the exhaust hood and disassemble it into the base and the cover, align the base of the rain cover with the wall hole (pay attention on the installation direction of the base as shown in Figure 1), and then mark the 4 punching positions.
5. Punch holes according to the punching positions.
6. Use plastic particles and screws to fix the base.
7. Align the buckle in the cover with the slot of the base to tighten it (pay attention that there is an arrow mark in the cover, when the base and the cover are matched, the arrow should face downwards).

Main Unit Installation

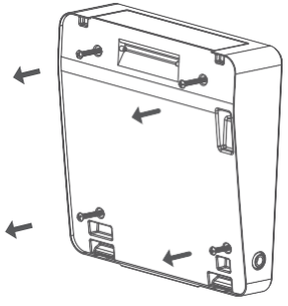
1. Remove the front panel, align the unit's air outlet with the wall duct and mark the screw holes, then secure the unit to the wall.



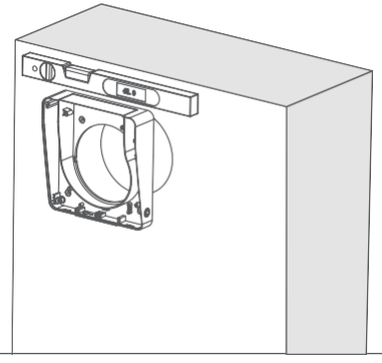
1 *Remove the exterior panel of the main unit.*



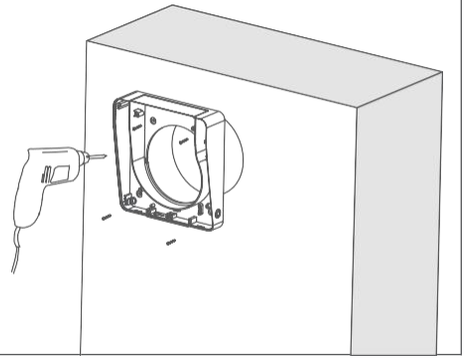
2 *Unscrew the four screws on the mounting plate inside the main unit.*



3 *Align the main unit with the wall holes and mark the positions.*



4 *Secure the main unit to the wall using the wall plugs and screws from the accessory pack.*



Instruction Manual for the user and the qualified installer

2. Insert the inner tube and connect the fan wires. Finally, reinstall the mounting plate into the main unit, tighten the four screws, and reattach the front panel to complete the installation.

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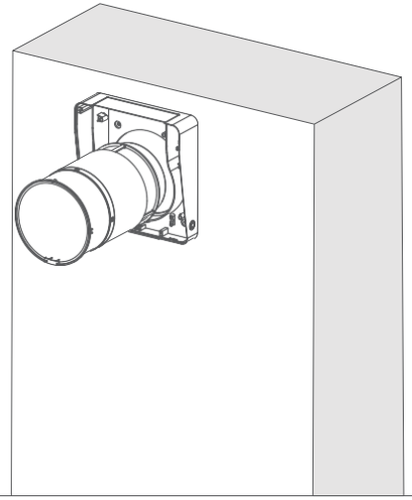

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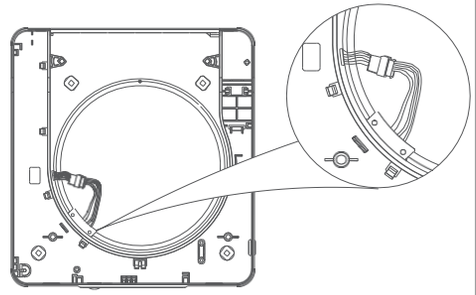

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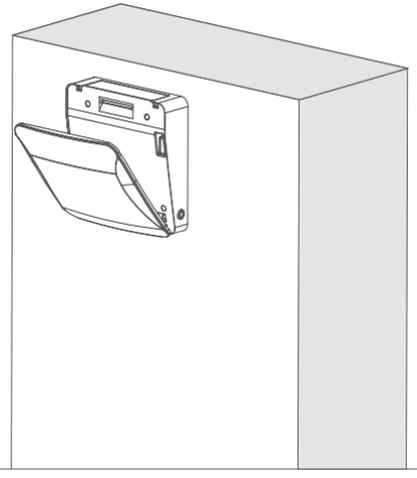

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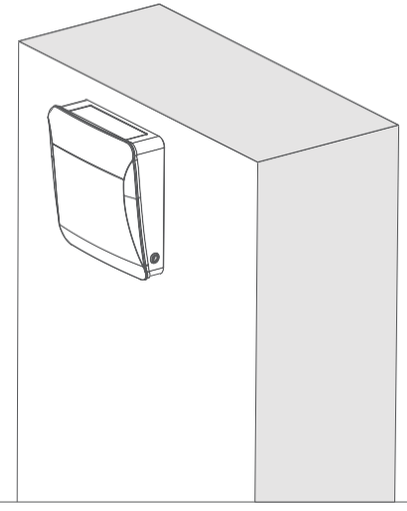
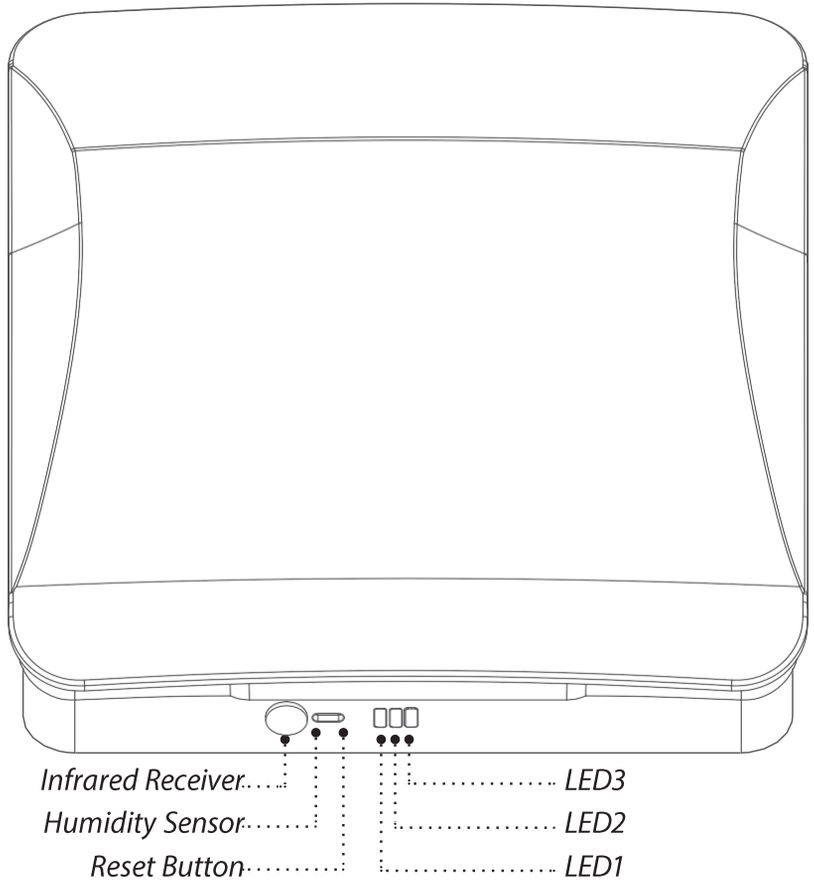


▶ FUNCTION DESCRIPTION



This product does not come with a SIM ejector tool.

This button can only be operated using a SIM ejector pin or other pin-shaped tool with a diameter of less than 2mm. Avoid using sharp objects to prevent damaging the product.

Instruction Manual for the user and the qualified installer

Button Operation:

1. Short Press RESET button: Select 1 speed/ 2speed/ 3speed/ power off circularly.

ON Power-off State:

1. Long Press RESET button 3s, Unit Enter Wi-Fi connecting mode, LED1 Green Light Blinking, and LED1 Fast Green Light Blink ×4, Wi-Fi connected.
2. Long Press RESET button 12s, reset filter alarm, LED1 fast red light blink ×3.
3. Long Press RESET button 15s, Restore factory settings, LED1 Red / LED2 Green / LED3 Blue Lights fast blink ×4: Factory reset complete.

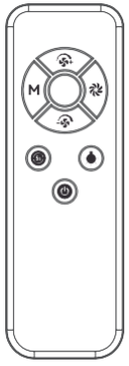
Function Light (RGB-LED)

Power-On State:

1. Green Light: Supply air mode
2. Red Light: Exhaust mode
3. Blue Light: Regeneration mode
4. Blue Light Flashing: Humidity-triggered exhaust
5. Red Light Flashing: Filter cleaning reminder (960h runtime)
6. LED1 Red Fast Blink x4: Filter timer reset

REMOTE CONTROL FUNCTIONS

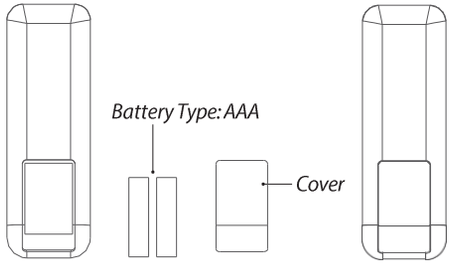
1. **Speed + / -:** Adjust 3 fan speed
2. **Mode Switch:** Change operation mode.
3. **Light On/Off:** Toggle LED indicators.
4. **Boost Mode:** Enter fan boost mode, the fan will run at highest speed for 30 minutes if no other operation.
5. **Filter Alarm Reset:** After cleaning the filter, press this button for 5s to reset filter alarm, The LED1 red light will flash 3 times.
6. **Power On/Off:** Switch the unit on / off.



Remote Control

REMOTE CONTROL INSTRUCTIONS

1. Insert batteries before use. Close battery cover until it snaps into place.
2. After insertion, secure cover completely.
3. To remove batteries: Push cover to unlock, then remove.



Keep remote away from children.
Batteries pose swallowing hazard.

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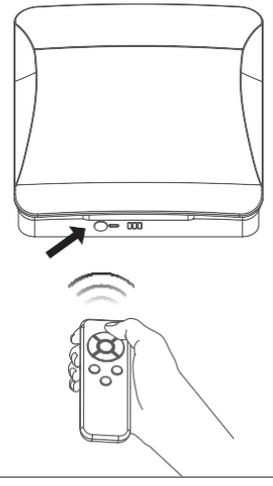


Note: *Ensure remote control is pointed at this area during operation.*

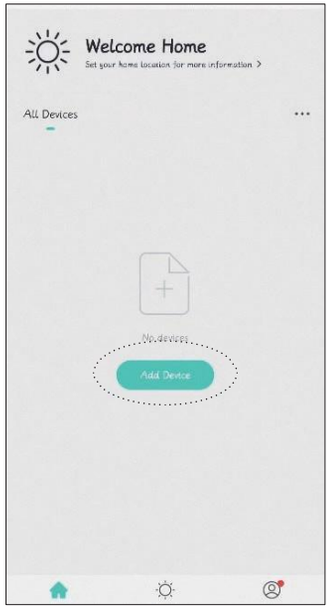
Instruction Manual for the user and the qualified installer

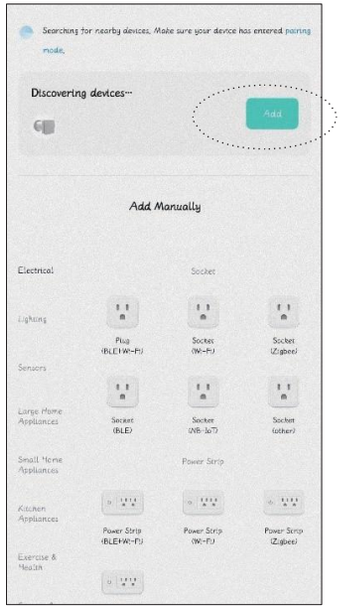
IOT NETWORK SETUP AND APP INTERFACE (OPTIONAL)

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.

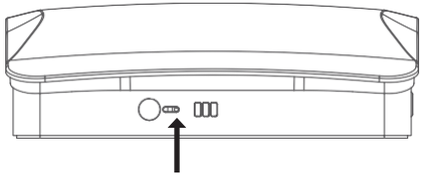
IoT Networking Operation Steps





1. Before enabling Lot 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).

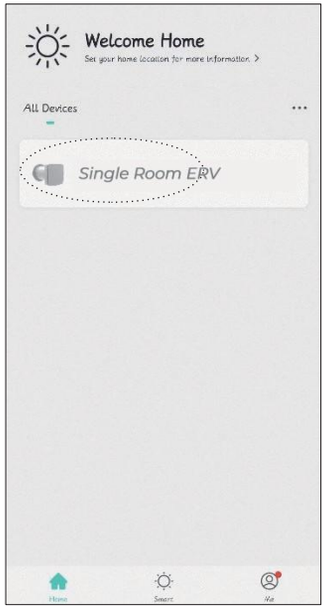
2. On standby, press and hold the reset button for 3 seconds, the green LED1 will start flashing, indicating the product has entered WiFi setup mode. User can now connect and operate the device with smartphone.



Instruction Manual for the user and the qualified installer

3. Open the downloaded 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.



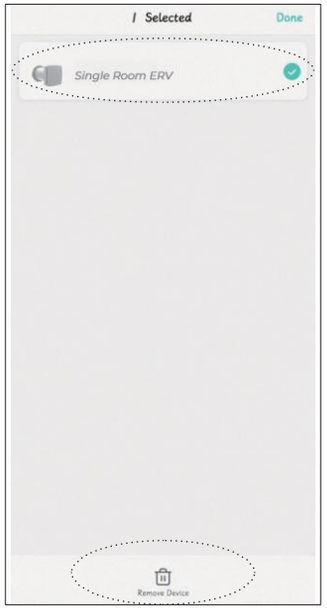
5. Click Add Device to find the WIFI signal of your home router, and make sure the WIFI name on the app is the same as the name of the WIFI connection to your phone, then log in with the WIFI password.

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

Remove the device from the app as follows:

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.

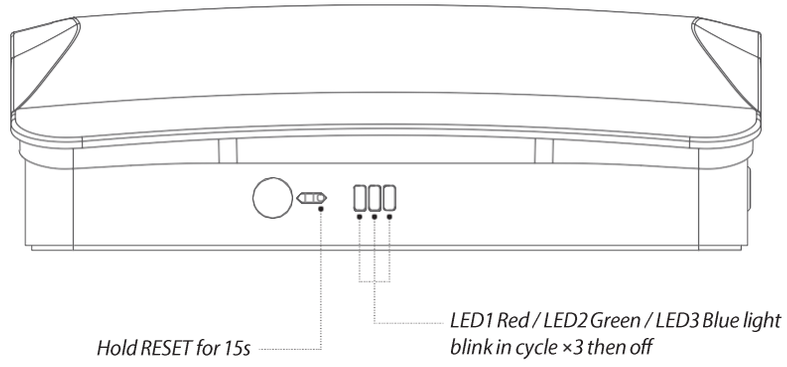


2. Click on the remove device option and confirm to successfully disconnect the device from the WIFI.

Instruction Manual for the user and the qualified installer

RESTORE FACTORY SETTING

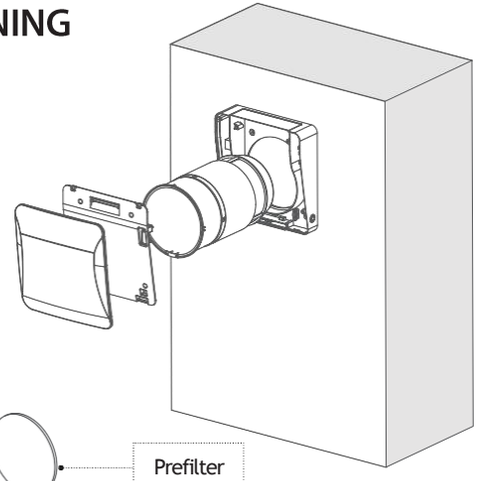
Press and hold the reset button for 15s, the LED1 red/ LED2 green/ LED3 blue light blink in cycle three times then turn off, the device will restore factory setting.

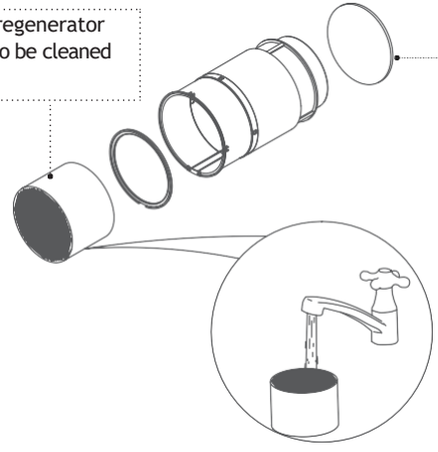


* The unit has the Wi-Fi function, the user can set the humidity limit in the app. For details, please refer to the description of the humidity control function under the IOT NETWORK SETUP AND APP INTERFACE section.

MAINTENANCE AND CLEANING

1. Remove the front panel from the indoor unit. Disconnect the wiring between the indoor unit and the inner duct, then detach the inner duct.
2. Take out the ceramic exchanger and the primary filter from the inner air duct.
3. The ceramic energy regenerator should be cleaned at least 4 times a year.





Ceramic energy regenerator cleaning can be rinsed directly with water. After rinsing is completed, put it in a sunny place and wait for it to dry.

The F7 filter is optional. If the unit is equipped with F7 filter, it should be cleaned at least 4 times a year. The F7 filter is not washable and should be vacuumed or replaced when dirty. Please contact the seller to purchase the replacement filters.

Even regular technical maintenance may not completely prevent dirt accumulation on the regenerator assemblies.

Subject the exchanger to regular cleaning to ensure high heat exchange efficiency.

Clean the exchanger with a vacuum cleaner at least once a year.

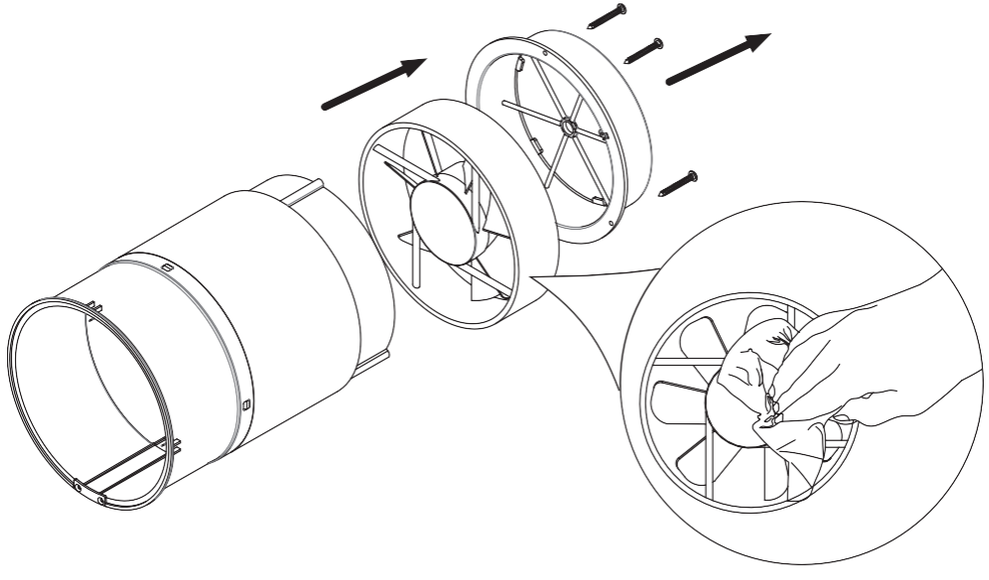
Clean the prefilter at least 4 times a year. The user can wash or vacuum the prefilter. Please note that after washing the prefilter, please dry it and reinstall it in the air duct. The lifetime of the prefilter is about 3 years. Please contact the distributor to purchase the replacement filters.

Instruction Manual for the user and the qualified installer

Fan Maintenance (Once Per Year).

Remove the fixed bracket in the inner duct and take out the fan.

Clean the impeller blades. Use a soft brush, doth, or a vacuum cleaner to clean the impeller. Do not use water abrasive detergents, solvents, or sharp objects. The impeller blades must be cleaned once a year.



STORAGE AND TRANSPORTATION RULES

Store the unit 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 unit 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 unit is protected against mechanical and weather damage.

Avoid any mechanical shocks and strokes during handling operations.

▶ TROUBLESHOOTING

Fault	Possible reasons	Troubleshooting
The fan does not Start up.	No power supply.	Make sure that the unit is properly connected to the power and make any corrections, if necessary.
	The motor is stuck, or the impellers are clogged.	Turn the unit 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 page 14.
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.