

MIA

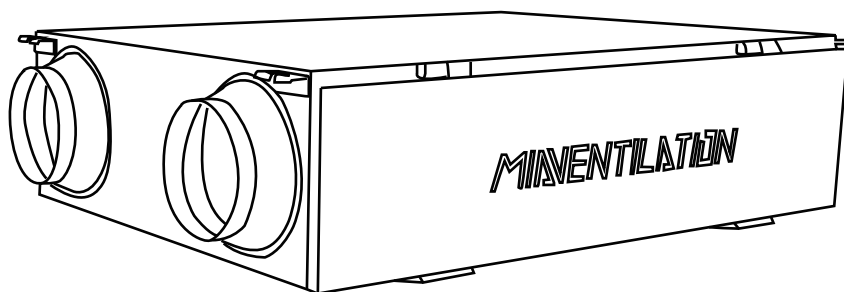
USER MANUAL

HEAT RECOVERY EXCHANGER

MIA-AHE · N

MIA-AHE · GL

MIA-AHE · JDN



*Please read this user manual
carefully before using*

Dear User

Thank you for choosing MIAVENTILATION products. Please read all the tips in this manual carefully before installing this product, in order to ensure the safety using, and prevent the unnecessary accidental injury or equipment damaged, please be sure to abide by it.

As the product specifications shown in this manual do not include the general manufacturing tolerances, the actual product may not be exactly what is listed.

Furthermore, this product is tested and measured under a strict controlled environment. There will be slight differences in performance if environmental conditions change.

Attention

Without prior written permission, it is strictly prohibited any form of reproduction, adaptation, or translation.

The information contained herein is subject to change without notice.

Warranty statements accompanying such products and services are clearly defined in the MIA's product and service warranties. Nothing herein shall be deemed to constitute an additional warranty. MIA shall not be liable for technical or editorial errors or omissions contained herein.

Without the express consent of MIA's and unauthorized alterations or modifications to the product, the user may lose the right to use this equipment.

MIA will be not responsible for any direct, indirect, incidental, secondary, or other damages caused by the provision or use of this information.

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Safety Precautions <must obey>

To avoid the unnecessary accidental injury and property damage, please must observe the following.

■ Following identification is to distinguish between the damage and the extent of the damage happened when ignoring the labeling content or operating wrongly.



Alert

The content of this column is 「Imagine a situation that could result in death or serious injury」



Attention

The content of this column is 「Imagine a situation where injury or material loss may occur」

■ The content that need to observe is distinguished by the following pattern. (The following is an example of the pattern)



This pattern indicates 「Prohibit」 content.



This pattern shows 「must be implemented」 content.



Warning



Prohibit

Can't use for the open-burning appliances(heating)'s ventilation. Special ventilation equipment is necessary when gas or oil heating furnace is used in the room.



Prohibit

Cannot switch off/on power with wet hand. Easily cause electric shock.



Prohibit

Self-modification, disassembly or repair is prohibited. Easily cause a fire, electric shock or injury. Maintenance, removal and repair, please contact the sales office, installation shop or the address written on this manual.



Warning

About the further filter's maintenance, please contact the sales shop or specialized company. Easily cause a fire, electric shock or injury.



Warning

Please cut off the circuit breaker in the power box before maintenance. Easily cause electric shock or injury.



Prohibit

Do not insert the fingers or sticks into the Fan, or its air supply and air outlet.

Easily cause injury due to the internal rotor high speed.



Prohibit

Do not touch water or boiling water. (Electrical components such as motors, switches, etc)

Easily cause short circuit or electric shock.



Prohibit

In order to prevent danger, qualified person is required to carry out the replacement work when the power cord is damaged.

Please contact the sales agent or installation shop.



Prohibit

Please do not switch on/off the Heat Recovery Exchanger when the flammable gas leaking.

The spark of the switch is easy to cause gas explosion.



Warning

In case of falling, please remove after use.

Easily to be left.

The machine did not take those users with low athletic ability, low sensibility, low intelligence, and insufficient experience or knowledge (including children) into consideration, so when the above people using this machine, their guardian must accompany and give the correct guidance. Take care of the children, do not let them play with the machine. Easily cause electric shock or injury.



Attention



Warning

Determine whether the machine is securely installed.

Falling easily causes injury.



Warning

Parts are securely installed.

Falling easily causes injury.



Warning

Should stop immediately when abnormal (sound, vibration, sticky smell) happens, and waiting for repair. Easily lead to unexpected accidents.



Prohibit

Do not place obstructions near the air outlets and return air inlet. Easy to cause injury when blowout or inhaled.



Warning

Electrical appliances, piping, and equipment installation, please entrust professional personnel to carry out. Improper installation can easily lead to unexpected accidents.



Prohibit

Do not place the burner on the air outlet. Easily lead to the insufficient burning.



Prohibit

Animals and plants should not be placed on the air outlet. Will have adverse effects on plants and animals.



Prohibit

Clean the filter regularly. The much dirt and dust attached on the filter easy to cause indoor oxygen deficit.



Warning

Please wear gloves when cleaning the filter. Vulnerable to injury.



Warning

Can not operate without the filter. The dirt and blocked dust on the Heat Recovery Exchanger will cause performance degradation, and easy to enter the eye while dirt or dust enter the room.



Warning

Due to its aerial work, please fix the ladder, and then carry out the maintenance. Falling easily causes injury.



Warning

Pay attention to the falling dirt, dust and insects when doing maintenance (remove the overhaul panel). May enter the eyes.



Prohibit

Do not use flammable spray near the machine.
It's easy to cause a fire.



Warning

Please confirm if for special use. It may result in deterioration of quality if under the following special conditions, food, plants and animals, precision instruments and the preservation of art.



Prohibit

Do not place containers of water on top of the unit.
When leaking, the inside of the unit will be flooded, and the electrical insulation will be damaged, easily cause electric shock.



Prohibit

Do not use volatile oil and metal brushes when cleaning antibacterial filter.
May cause the filter's damage, which is easy to make the dirt and dust to enter the room and eyes.



Warning

Turn off the circuit breaker for safety when not in use for a long time.
Easy to cause a fire if more dust accumulated.



Prohibit

The drip of the internal water is easy to wet the house items.
Please contact the sales shop or repair shop.

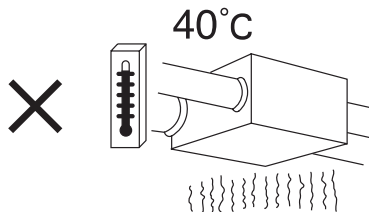
Safety Precautions <must obey>

■ Do not use it in the following places

- The place with high temperature or very close to the flame.

Heat Recovery Exchanger should be installed in the place where the surrounding temperature does not exceed 40 °C.

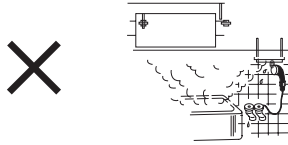
If under high temperature, it's easy to cause the deformation of the filter and heat exchanger or burn out the motor.



- The place where the humidity is high.

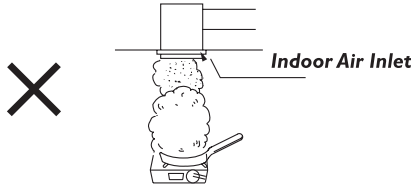
Please do not install in places with high humidity like bathroom or where the high-humidity steam is generated.

The dew appeared in the machine, easily leads to electric shock or short circuit and other electrical accidents, and also will cause dew dripping.



- The place where full of cooking oil fumes, such as Kitchen.

The filter or heat recovery exchanger can not be used if the oil is attached on it, and also easily cause a fire.



- Please do not install this product and the indoor air vents nearby the Machinery Factory, Chemical plant, and research facilities, where easy to produce harmful gases, such as acid, alkali, organic solvents, organic solvents, and paints, as well as the corrosive gas.

(Gas poisoning, internal corrosion and deterioration, easy to cause a fire.)

Precautions for use

Prevent insects intrusion

Heat recovery exchanger is the machine that inhales the outdoor fresh air into the room. Therefore, it's possible to draw insects from the outside rain cover into the inside of the machine if there are insects in outdoor environment.

The rain cover with a protective mesh is recommended when in environments where there are many insects or there are lights around the exhaust vents because the insect problem is influenced by the natural environment.

Traits

- Energy saving and ventilation

Effectively recover the lost heat generated by ventilation, and also can save the fees of using air-condition.

- Energy-saving equipment

This product can greatly help to reduce the load of fresh air, so part of the heat energy can be recycled, and air conditioning equipment can be miniaturized.

■ **Function of humidification**

When refrigerating, the humidity of outside air will be reduced, so that the humidity of air sent into the room is close to the indoor humidity.

When heating, the humidity of outside air will be increased, so that the humidity of air sent into the room is close to the indoor humidity.

■ **Ventilate stably**

The change of indoor temperature is small when ventilating. Due to that the exhaust air and supply air is happening at the same time, so the air can be changed stably in a high-sealing room.

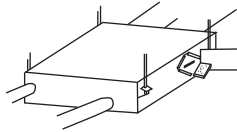
■ **Effect of sound insulation**

The air duct and heat recovery exchanger can insulate the sound effectively, so that prevent the outdoor noise from entering the room, or prevent the indoor sounds from transmitting to the outside. This will not disturb the office or store.

Precautions for use

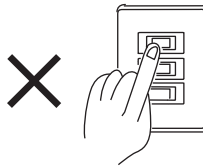
■ **Filters is necessary**

If there's no filter, the Heat recovery Exchanger will be filled with dirt and dust, and the performance will be degraded, even can not be used.

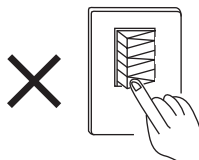


■ **The switch conversing must be exact.**

It will not only cause the wrong operation, but also bring adverse effect on the switch and internal relays when the switch is changed quickly.

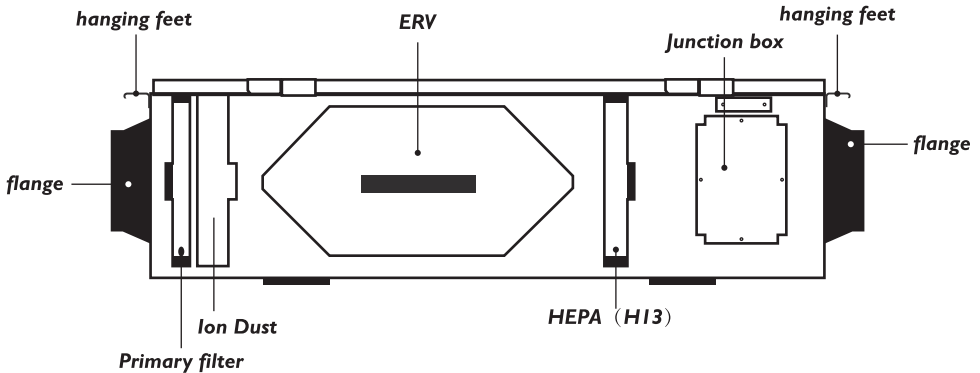


■ **“Normal Ventilation” is prohibited, because it will cause dew condensation at the fuselage or indoor air outlets if “Normal Ventilation” is set for indoor heating in Winter.**



Name of each part and usage

■ Name of each part



■ Usage

● Heat Recovery Exchanger Ventilation

Exchange the out air with the indoor air by heat, so that can make the temperature and humidity close to the indoor, and then supply air into the room.

● Normal Ventilation

Increase the amount of exhaust, and then discharge the indoor polluted air when there's air pollution in the room.

**Note: As the air displacement increases, the negative pressure will be generated in the room, and the outdoor air may enter the room directly from the gaps like door and window. Please do not start this function if you don't want outdoor air to enter the room directly from the gap.*

Judgment and handling method when Anomalies happens

■ If it's considered a malfunction.

Please check according to the following table. If there's any abnormality, please turn off the switch, set the special circuit breaker as "OFF" status, and then contact the sales store and repair shop.

Problem	Solutions
<ul style="list-style-type: none"> ● Not work after turning on the switch. ○ Not supply the air 	<ul style="list-style-type: none"> ● Does the circuit breaker trip? ● Is there a blackout? ○ Is the filter clogged with dust?(Please maintain following the maintenance methods of each model.)

If the problem still can not be solved after taking the above solutions or some other problem happens, please contact the sales store.

Maintenance Method

■ The maintenance of heat recovery exchanger

- If the heat exchanger has been used or a long time, the filter will be clogged with dirt and dust, which will reduce the air exchange volume, easily to cause more louder noise. Please clean regularly according to the amount of attached dirt and dust.
- The air volume and filter efficiency of this product will reduce sharply if been used under harsh environment (the place full of dust). Please clean the filter and change it frequently, in order to ensure product's performance. If the environment continuously deteriorates, please switch to reduce the air volume or stop using this product to prevent the outside polluted air from entering into the room.
- Please cut the power before removing the access panel when maintaining.
- Please fix the ladder, wear gloves and then do the cleaning.
- Please pay attention to the falling of filter, screw, dirt, dust, and insects, etc.

Filter replacement cycle:

Filter replacement cycle (According to use environment) : 3~12Months.

Safety Precautions <must obey>

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Alert

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This pattern shows 「Arise Attention」 content.



This pattern shows 「Prohibit」 content.



This pattern shows 「must be implemented」 content.



Alert



Warning

The installation must be carried out in accordance with the instruction strictly.
Improper installation may cause electric shock or fire accident.



Warning

Do not use the power supply except 220V, 50Hz.
Easy to cause a fire, and electric shock.



Prohibit

Please do not make the metal duct to touch with the metal mesh, wire braid, and the wood on which the metal plate attached when it passes through them.

If electric leakage, easy to cause a fire.



Warning

Please switch off the circuit breaker in power box when maintain, checking and no using for a long time. Vulnerable to electric shock or injury.



Warning

The specification can not be changed or transformed absolutely. Easy to cause a fire, electric shock or injury.



Warning

Please entrust the sales shop or specialized person to install. If installed improperly, will easy to cause water leakage, electric shock, and fire.



Warning

The combustible gas and other exhaust gases should not be inhaled into the room through the outside air inlet. Easy to cause a serious accident due to lack of oxygen in the room.



Warning

The outside air inlet should be installed in the location where the exhaust of heat recovery exchanger will not directly reverse. Easily lead to indoor pollution, harmful to the health.



Attention



Prohibit

Please do not put the indoor air inlet at the place where easily to inhale high temperature or high humidity. Easily affects the machine's internal working, which will lead to breakdown, electric shock and fire.



Warning

Install the anti-bird mesh or similar items at the vent. Please remove if anything blocked, such as the bird's nest, etc. Otherwise it's easy to cause indoor oxygen lacking.



Warning

Do not install on the infirm ceiling. When the stability of ceiling is not sure, please strengthened again to ensure sufficient stability. In addition, please do not install without following the instruction. Easy to cause injury if fall down.



Warning

Installed at the inside of heat-insulating space(or the space where the outside air is insulated.) If installed in the outside of heat-insulating space(the space similar to the external air condition), the inside of host will dew in winter, which easily causes the electric shock or dripping.



Warning

The installation of electric wire must be strictly according to the electrical equipment technical standards and indoor wiring regulations. The wrong wiring construction, can easily cause the electric leakage, electric shock and fire.



Prohibit

Please do not insert fingers or other things into the rotating part during operation. Easily cause injury.



Prohibit

It's forbidden to use in places with water. Please do not install in the bathroom or other places with high humidity. Easily cause electric shock or breakdown.



Warning

According to the location of the special circuit breaker, it is sometimes required to install a leak-proof circuit breaker. It's easy to cause electric shock if not install the leak-proof circuit breaker.



Warning

The outside air duct should incline to the outdoor when installing. It's easy to cause water seepage, wetting the indoor items if installed improperly.



Warning

Please install in a place where dirt and dust can not enter into the air duct when installing. It's easily lead to indoor oxygen lacking if too much dirt and dust attached on the filter.



Warning

The outside air duct extends to the indoor air duct to prevent dew condensation. It's easy to cause water leakage inside the house and wet the indoor items.



Warning

The parts used in installing must be specialized.(including accessories) It's easy to cause the unit dropping, fire and electric shock if not using the specialized parts.



Prohibit

Do not install this product and indoor air inlet in a place where there's much oil fumes like kitchen.
It's easy to cause a fire.



Prohibit

Please do not install this product and indoor air inlet in a place where the temperature is high or very close to the heat source.
It's easy to be hot and cause a fire.



Warning

Please make sure that all parts are securely installed.
It's easy to cause injury if falling.

Safety Precautions <must obey>



Attention

■ The following situation should be avoided in the installation of pipeline engineering.

(1) Too curved



Prohibit

(2) Bend in many places



Prohibit

(3) Narrow the diameter of the connection pipe



Prohibit

■ Easily lead to unexpected accidents.



Prohibit

Please do not install this product and the indoor air vents nearby the Machinery Factory, Chemical plant, and research facilities, where easy to produce harmful gases and corrosive gas.
Gas poisoning, internal corrosion and deterioration, easy to cause a fire.



Prohibit

Please do not install in places with high humidity like bathroom or where the high-humidity steam is generated.
The dew appeared in the machine, easily leads to electric shock or short circuit and other electrical accidents, and also will cause dew dripping.



Prohibit

Please do not install this machine in a place where the indoor temperature is obviously lower than the outdoor temperature.
Easily lead to electric shock and breakdown.



Prohibit

Please do not insert fingers or sticks into the fan, air inlet or air outlet.
Easily lead to injury due to the high speed rotating inside the fan.



Warning

The specified cable is required to firmly connect the power cables with the connection cable. The connection part must be stable and firm, will not be affected by external cables.
It's easy to be hot and cause fire if not connected or fixed stably.



Prohibit

Please do not install in a place where the flammable gas may leak.
Easily lead to fire, if the leaked gas gathers around this machine.



Warning

Please pay attention to the center of gravity and weight when moving.
Easily lead to falling, and causing injuries if lifted improperly.



Warning

The power cable and connection cable should be installed firmly. The power cover should be compacted. If the power cover is not compacted, dirt and dust will enter into the machine, causing the terminal connection being hot, easily lead to fire and electric shock.



Please pay attention to the wheel rotation caused by against wind. Although the power has been switched off, there's still a risk of being entangled in the rotation, and getting hurt.



Prohibit

Please do not reverse this machine or put overload on this machine like air duct.
Falling easily leads to injury.



Prohibit

Please do not put eyes directly against the air outlet (especially when staring up).
Dirty things may enter into the eyes.



Warning

The ventilation is required to be installed on the ceiling when there's high temperature and high humidity on the ceiling.
Easily lead to fire, and electric leakage.



Prohibit

Can not use for the open-burning appliances(heating)'s ventilation. Special ventilation equipment is necessary when gas or oil heating furnace is used in the room.



Warning

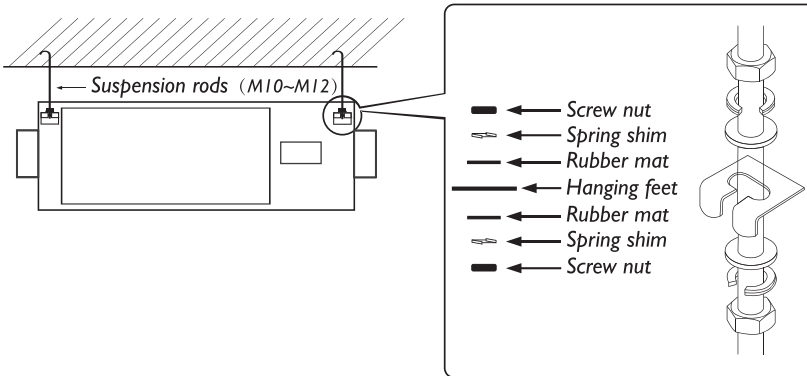
Please confirm if for special use. It may result in deterioration of quality if under the following special conditions, food, plants and animals, precision instruments and the preservation of art.

Note: Please wear gloves or other safety appliance. Prevent from getting hurt.

Construction Method

1.1 Machine Installation and Duct Installation

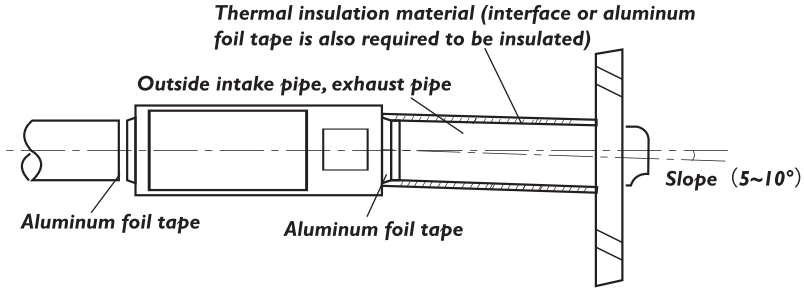
■ Install 4 hoisting bolts (outsourcing: M10)



Installation instruction:

- Make sure the ceiling hanging screws, nuts and gaskets are well-prepared.
- The hanging screw must be vertical, and can fully withstand the weight of the equipment, so that the equipment will be kept in a stable and solid position.
- Easy to vibrate, causing danger if installed not firmly.

■ Insert the air duct (purchased) into each connection, and seal them with tape (purchased) or seal belt (purchased)



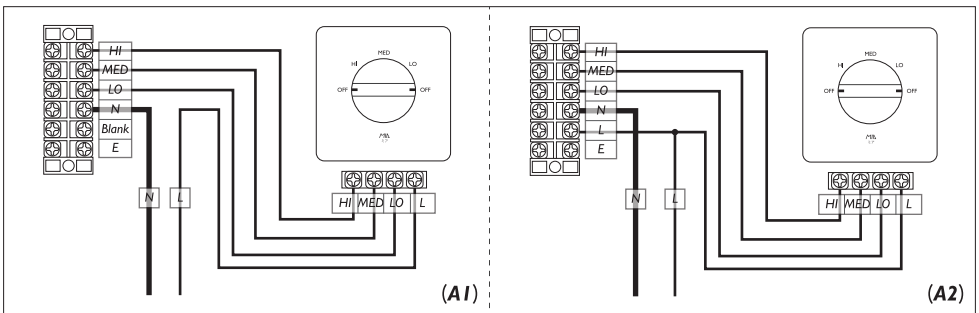
- The connection of air outlet/air inlet with the duct should be pressed tightly with pipe band, and wrapped with aluminum tape to ensure it will not leak.
- The installation location of the indoor air inlet and outdoor air outlet should be as far as possible.
- The distance between outdoor air outlet and the outdoor air inlet shall be more than 1 meter.
- To avoid water entering into the room, the outside two ducts should tilt down (incline 5~10°).
- The heat-insulating materials (such as glass wool, insulated cotton, thickness is 25mm), which can prevent dew condensation must be installed on the outdoor two ducts (outdoor air outlet and outdoor air inlet).
- The insulating layer is required between the duct and the wall when the metal duct passes through the metal plate or metal mesh. Otherwise, it will lead to electric leakage or electric shock.

1.2 Power Connection

■ Wiring diagram

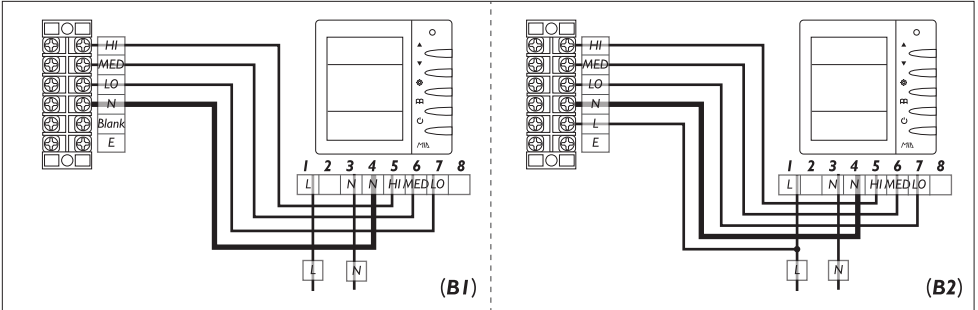
Normal type, 220V, three-speed knob switch wiring diagram (A1)

Ion Dust removal type, 220V, three-speed knob switch wiring diagram (A2)



Normal type, 220V, three-speed intelligent LCD Controller wiring diagram (B1)

Ion Dust removal type, 220V, three-speed intelligent LCD Controller wiring diagram (B2)



- Please use the wire that corresponds to the current when multiple machines are running together.
- The double disconnecting device, in which the contact separation is not less than 3mm, is required in the power supply circuit when installing.
- The Ground projects should be implemented in accordance with national standards and regulations.
- After finished, check the wiring again before turning on the power, to avoid danger.

Trial Operation

- Please check the wire connection, and test this product's operation after finished the installation.
- Check the each operating status in accordance with the following table when switch on this product.
- If any abnormal conditions occurs, please check whether the wire connection is wrong (in order to prevent the electric shock, please turn off the power, and then check the wire connection).
- Please install the cover of electrical box well if there's no problem in trial operation.

Note: To avoid accidents, all the above steps must be carried out by professionals.

Control Box		Checking Matters
Gear Setting		Air Supplying Condition
Heat Recovery Exchanger	High	In checking room, the air inlet and air outlet is controlled by different gears.
	Medium	
	Low	

Disclaimer:
 (MIA company) will do not take the responsibility for the accidents and injuries caused by improper installation.

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製品保証書

WARRANTY CARD

Suzhou MIA Intelligent
Technology Co., Ltd.

www.miachina.net

MODEL: _____

NUMBER: _____

USER NAME: _____

USER TEL: _____

USER ADDRESS: _____

STORE NAME: _____

STORE TEL: _____

DATE: _____

During the warranty period, failure occurs in normal use conditions, MIA promised ten-year warranty.

In the following circumstances, MIA only provide paid service:

- 1, Because of the earthquake, fire, flood and other natural disasters and power failures, pollution, erosion caused by chemicals.
- 2, Maintain, disassemble, or repair this product without following the instructions provided.
- 3, Repair with using the parts, which is not from MIA company and also not authorized by MIA.
- 4, Change the original equipment installation place without any authorized permission.

/MIA/

MIA

製品検定

CERTIFICATE

Suzhou MIA Intelligent
Technology Co., Ltd.
www.miachina.net

Under granted factory certification,
this product has been
tested according to
the National relevant
Technology Standards.

MODEL: _____

QUANTITY: _____

QC: _____

DATE: _____



Maintenance Record Card

Maintenance Records	
Maintenance Date __Y__ M __ D	
Maintenance Situation:	

Parts replacement:	Maintenance Company:
-----	-----
Maintenance Staff Signature:	Customer Confirmation Signature:

Maintenance Records	
Maintenance Date __Y__ M __ D	
Maintenance Situation:	

Parts replacement:	Maintenance Company:
-----	-----
Maintenance Staff Signature:	Customer Confirmation Signature:

Maintenance Records	
Maintenance Date __Y__ M __ D	
Maintenance Situation:	

Parts replacement:	Maintenance Company:
-----	-----
Maintenance Staff Signature:	Customer Confirmation Signature:

Maintenance Records	
Maintenance Date __Y__ M __ D	
Maintenance Situation:	

Parts replacement:	Maintenance Company:
-----	-----
Maintenance Staff Signature:	Customer Confirmation Signature:

Maintenance Instructions

Dear user:

Thank you for purchasing our products. We will provide the following services for you when seeing the invoice or warranty card in accordance with the "Consumer Protection Law".

1, 10-year whole machine warranty from the date of purchase.

2, The following situations do not belong to the free warranty scope:

a. Can not provide the purchase invoice or warranty card; Modify the invoice or self-disassemble products.

b. Damaged caused by force majeure (eg, fires, flood, earthquakes, lightning, icing, nuclear emissions, etc.)

c. Not used in accordance with the instructions, or warning labels.

3, After the expiration of the warranty, the local special maintenance station will continue to provide the service, and appropriately charge the fees of replacing the original parts and components.

Note: Please properly keep the "Fresh Air Ventilation System Product Warranty Card" and "Maintenance Records" to ensure your legitimate rights and interests.



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Qi Wang.