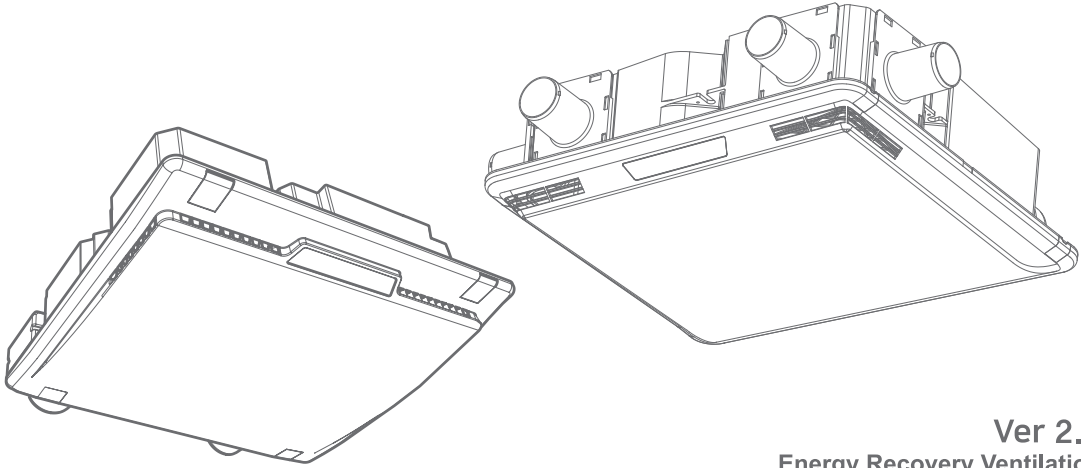


HIMPEL



Ver 2.0
Energy Recovery Ventilation

hueven C

User Manual

HRD-50C
HRD-70C

HRD-100C
HRD-100C(DS)

- Thank you for purchasing the product of Himpel Co., Ltd.
- You can use the product more conveniently and safely if you read the User Manual in advance.
- Make sure to read [**Safety Precautions**] prior to use and then use the product accurately.



Customer consultation
and inquiries

+82-31-424-8403

WWW.HIMPEL.CO.KR



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Features of the product

hueven

HRD
-
50C,
70C

1 Fresh air

Filters and supplies fresh outside air to indoor, and discharges the polluted indoor air to outside.

2 Energy-saving

It is possible to reduce the costs of heating/cooling by more than 20% when compared with ordinary ventilation when retrieving cooling/heating energy discarded at the time of ventilation.

3 Anti-frost protection

It prevents formation of frost by blocking the indoor and outdoor air through the application of outstanding motorized damper (MD) with excellent sealing capabilities on the outside apparatus (OA) and exhausts apparatus (EA) at the time of controlling and cessation of operation of air supply and exhaust section by detecting the indoor and outdoor temperature differences during winter seasons.

4 3-stages wind volume control

Wind volume can be adjusted to 3 stages of low, medium and high for adjustment in accordance with the user's convenience.

5 Automatic ventilation

When automatic mode is selected, it is operated 20 minutes at every 1 hour interval to assist the user to ventilate easily.

6 Remarkable power-saving operation

We were able to realize remarkably low-power consumption in comparison to other products in the same class in Korea by applying highly efficient fan and low power consumption BLDC motor. As such, the burden of electric cost is very low even if it is operated throughout 24 hours a day.

7 Economic value in installation

It is the first non-ducted ceiling type product in Korea and is capable of offering more than 40% in the reduction in installation cost and initial investment along with increased utilization of space through minimization of the duct installation and product installation spaces.

HRD
-
100C,
100C(DS)

8 Multi-branch structure

It is capable of supplying and exhausting air to and from a total of 3 rooms by being applied to 2 more rooms in addition to the room the product is installed without the need for additional components and materials.

9 Bypass

Polluted indoor air is exhausted to outside without having to pass through the heat exchanger due to its bypass function.

HRD
-
100C,
100C(DS)

Product specifications

| Model | HRD-50C | | | HRD-70C | | | HRD-100C | HRD-100C(DS) | |
|--------------------------|--|-------|-------|-----------------------------|-------|-------|---------------------------------|--------------|------------------------|
| Power | Ø 1 X 220V X 60Hz | | | | | | | | |
| Speed | High | Med | Low | High | Med | Low | High | Med | Low |
| Air volume | 60CMH | 50CMH | 40CMH | 80CMH | 70CMH | 60CMH | 110CMH | 100CMH | 70CMH |
| Power consumption | 16W | 14W | 11W | 28W | 24W | 16W | 33W | 27W | 20W |
| Noise | Less than 40dB | | | | | | | | |
| Filter | Pre + HEPA filter (195x129x15T) | | | | | | Pre + HEPA filter (260x170x16T) | | |
| Heat recovery efficiency | Heating: 71% / Cooling: 60% | | | Heating: 77% / Cooling: 60% | | | Heating: 75% / Cooling: 70% | | |
| Dimensions | 550(W)X475(D)X161(H)mm | | | | | | 610(W)X560(D)X187(H)mm | | 620(W)X560(D)X181(H)mm |
| Connecting duct | OA, EA : Ø75 | | | | | | OA, EA : Ø100 / RA, SA : Ø65 | | |
| Weight | 7Kg | | | | | | 9Kg | | |
| Options | RS485 communication, home network linkage, CO2 | | | | | | | | |

※ Specifications and functions of the product can be changed without prior notice for the purpose of improving quality.

※ The following safety precautions below are aimed at preventing unexpected risks or damages in advance by using the product safely and accurately.



Symbol to indicate the application method to be avoided to prevent hazards.



Symbol to indicate reminder of precautions regarding issues and manipulations with concerns of inducing hazards. Examine carefully and comply with the instructions.

○ Precautions at the time of installation



Warning

※ If the instructions are not complied with, user can die or incur serious injuries.



Use rated power supply

(This product is for exclusive use with 220V/60Hz power supply.)

* Can become the cause of damages to product and electrocution.



Do not arbitrarily dismantle, repair and remodel the product.

* Can become the cause of fire and electrocution.



Execute grounding work

* Can become the cause of damages to product and electrocution.



Make sure to install leakage circuit breaker and dedicated switch.

* Can become the cause of fire and electrocution.



Make sure to make request for electrical works to experts or service center

* There is risk of electric leakage and electrocution.



Do not store or use inflammable gas or ignitable substances in the vicinity of the product

* Can become the cause of fire and electrocution.



Do not arbitrarily connect or process the electric cable for use

* There is risk of electrocution or fire.



Do not manipulate the power supply section with wet hand

* You can incur injuries due to electrocution.



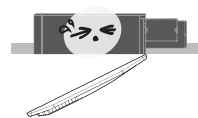
Warning

※ If the instructions are not complied with, user can incur injuries or property losses.



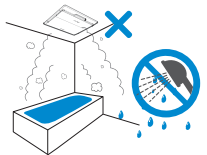
Install firmly and accurately at a location capable of supporting the weight of the product

* Take precaution against injuries due to falling.



Check that the main body and the external cover are firmly attached.

* Take precaution against injuries due to falling.



Do not install in location with high humidity such as washroom, etc.

* Take precautions against electrocution or breakdown.



Do not install in location with abundance of smoke¹⁾ such as kitchen, etc.

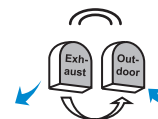
* It becomes the cause of shortening of lifespan and breakdown of filter or enthalpic membrane heat exchanger

¹⁾ Black smoke generated when oil or gas is incompletely combusted.



Make sure to keep the duct connected to outside warm

* Otherwise, it can become the cause of formation of dew and condensed water in the main body and duct during winter seasons.



Maintain prescribed gap or install in opposite direction between the outdoor fresh air inlets and exhaust outlet.

* Exhaust air can influx into the indoor area



Safety precautions

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Precautions at the time of use

Warning

※ If the instructions are not complied with, user can die or incur serious injuries.

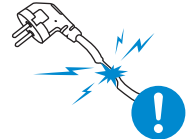
Turn off the power switch if there is strange noise, odor or smoke generated from the product.

* There is risk of fire or electrocution.



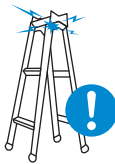
Stop using the product if the power cable has been broken.

* Please use the product after having replaced the power cable by contacting the A/S Customer Center since there are safety risks.



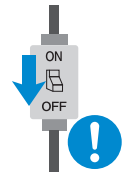
Do not use unstable and unsafe support at the time of filter exchange, inspection and cleaning

* Can become the cause of falling.



Make sure to turn off power at the time of filter exchange, inspection and cleaning.

* There is risk of fire or electrocution.



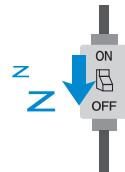
Do not block the fresh air inlet and exhaust outlet by inserting finger or foreign matters.

* Can become the cause of breakage in the product .



Cut off the main power supply when not using for prolonged period of time.

* There is risk of fire or electrocution.



Do not manipulate the switch on the product in the event of leakage of gas.

* It can become the cause of explosion and fire.



Do not use in vicinity of electric heater or fire.

* Can become the cause of deformation of product and fire.



Warning

※ If the instructions are not complied with, user can incur injuries or property losses.

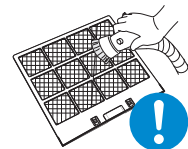
Do not clean the product by using thinner and benzene chemical products.

* Can become the cause of fire, deformation and discoloration



Clean the filter and enthalpic membrane heat exchanger regularly.

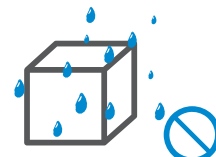
* If not, it can become the cause of degradation of performances and generation of noise.



Make sure that water does not enter the electrical components (motor, etc.).

It can become the cause of breakdown of the device and electrocution.

Cleaning the heat exchanger and HEPA filter with water is strictly prohibited!





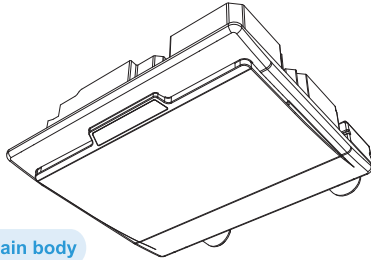
Composition and name of the product components

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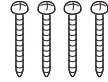
Product composition

※ In order to install the product, additional components and materials, including connecting duct, air supply/exhaust ventilation cap, and band, etc. (Specifications can differ depending on the site situations and device operation and management standards.)

HRD-50C, HRD-70C

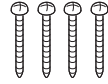


Main body



(4 X 38) 8

Installation screws



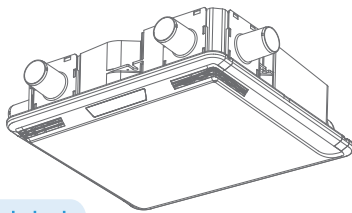
(4 X 12) 4

Grill screws

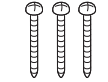


User Manual

HRD-100C, HRD-100C(DS)

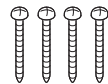


Main body



(4 X 38) 7

Installation screws



(4 X 12) 4

Grill screws



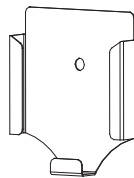
User Manual

How to replace remote control and battery

※ Wireless and wired Controller can be composed differently depending on the product specifications.



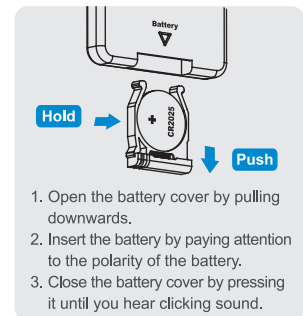
Card type remote control



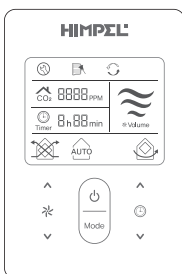
Remote control holder



Lithium battery (CR 2025) Battery



1. Open the battery cover by pulling downwards.
2. Insert the battery by paying attention to the polarity of the battery.
3. Close the battery cover by pressing it until you hear clicking sound.



H control unit



Composition and name of the product components

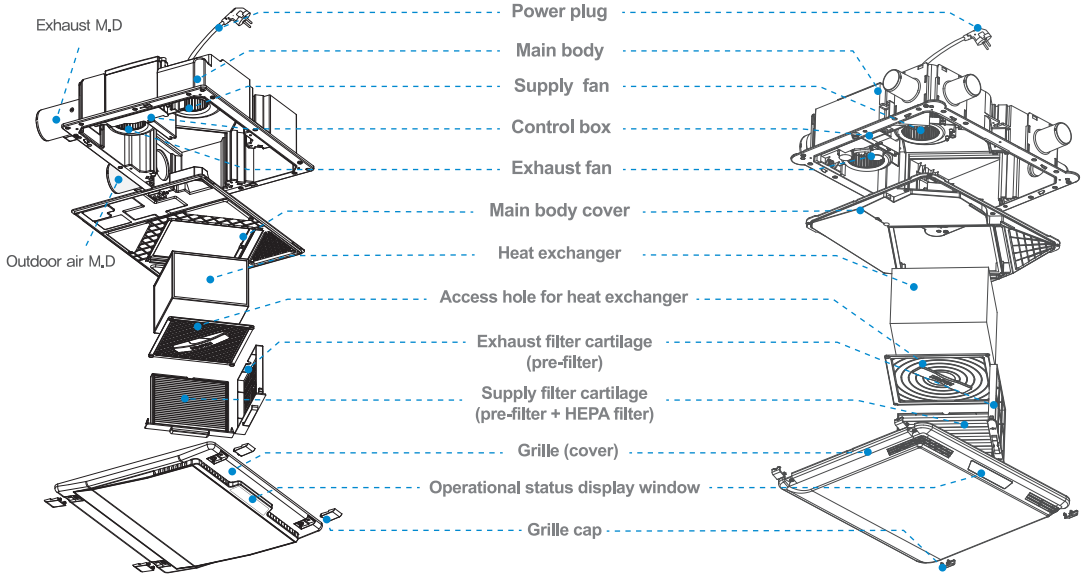
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Name of each part

※ Configuration or composition of component parts can change without prior notice for the purposes of improving the performances and quality of the product.

HRD-50C, HRD-70C

HRD-100C, HRD-100C(DS)



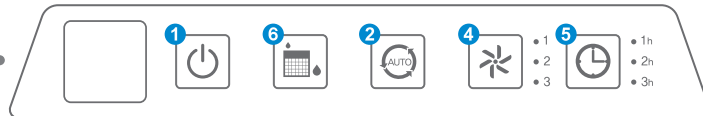
Basic grille



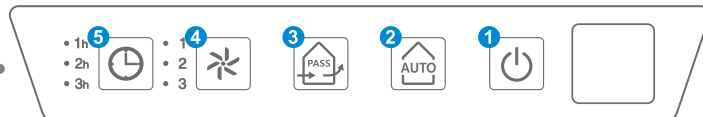
DS grille

Explanations on operational status display window

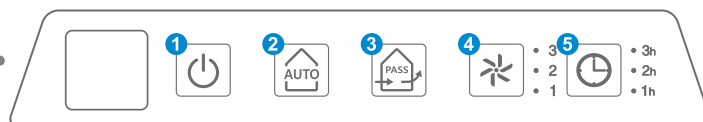
HRD-50C, HRD-70C



HRD-100C



HRD-100C(DS)



- 1** Indicate status of power supply
- 2** Indicate automatic mode
- 3** Indicate bypass mode
- 4** Indicate status of air volume
- 5** Indicate timer operation
- 6** Indicate filter replacement



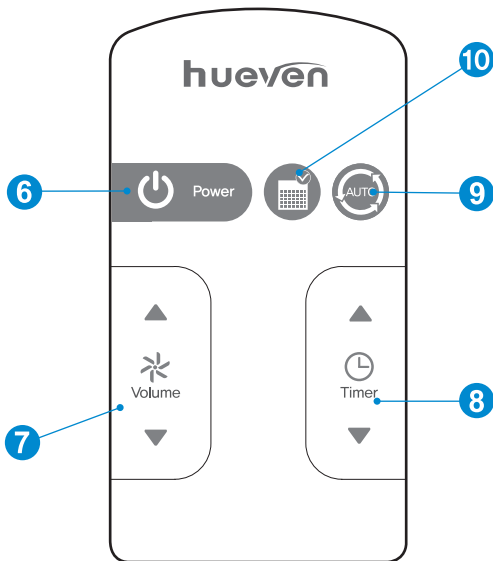
Composition and name of the product components

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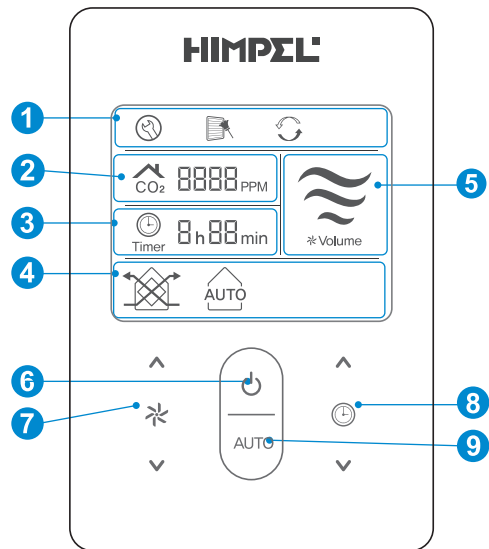
Explanations on controller button and icons

HRD-50C, HRD-70C

Card type remote control



H control unit



⑤ - CO₂: Indication of the level of fine dust is a basic function

- ① Indicate product status
- ② Indicate indoor air quality
- ③ Indicate reservation time
- ④ Indicate operation mode
- ⑤ Indicate wind volume status
- ⑥ Power button
- ⑦ Air volume setting button
- ⑧ Reservation time setting button
- ⑨ Automatic setting button
- ⑩ Filter inspection clear button



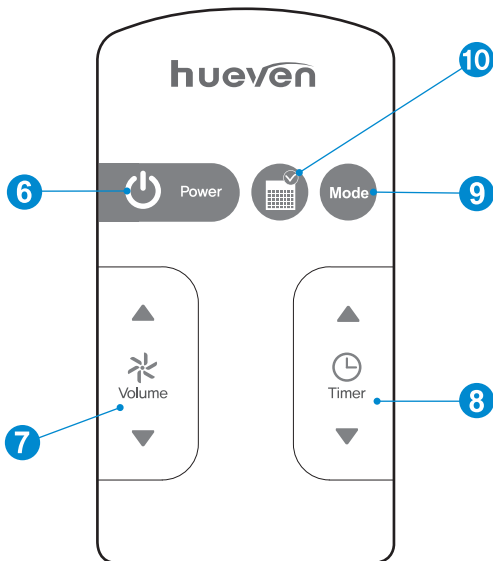
Composition and name of the product components

hueven

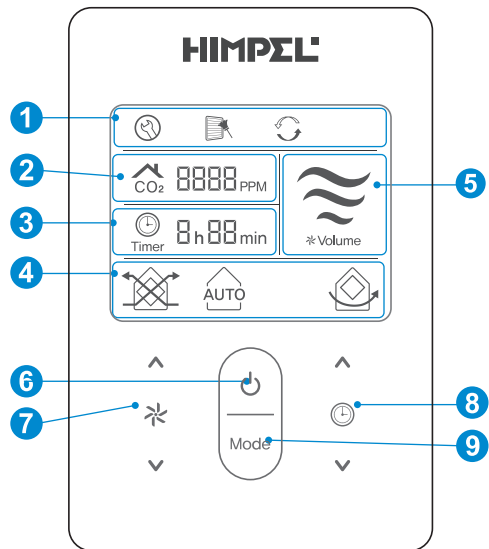
Explanations on controller button and icons

HRD-100C, HRD-100C(DS)

Card type remote control



H control unit



⑤ - CO₂: Indication of the level of fine dust is a basic function

- ① Indicate product status
- ② Indicate indoor air quality
- ③ Indicate reservation time
- ④ Indicate operation mode
- ⑤ Indicate wind volume status
- ⑥ Power button
- ⑦ Air volume setting button
- ⑧ Reservation time setting button
- ⑨ Mode setting button
- ⑩ Filter inspection clear button



※ Setting can be different depending on the composition of wireless and wired controller.

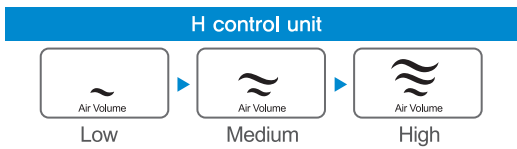
Select operation mode and air volume

1. Commence operation of the electric thermal exchanger by clicking the Power button.

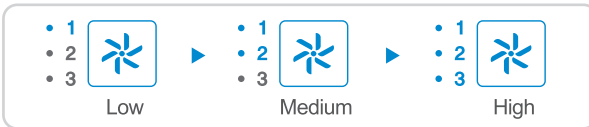
- Pilot lamp for power supply and air volume will light up in the operational status display window of the product.
- Operation will commence in ventilation mode when power has been turned ON.

2. Select the air volume by using UP and DOWN button for the air volume in the remote controller.

- You can select the air volume in the order of Low ▶ Medium ▶ High



- Pilot lamp for indication of air volume will light up according to the air volume selected in the operational status display window of the product.



- When the ventilation mode is initiated, it will start with Low air volume.

3. When the Power button is clicked again, operation will stop.

Automatic (ventilation) mode

1. Select the automatic (ventilation) mode operation by clicking 'Mode' button on the controller.

(Button for remote control and H control unit of HRD-50C and 70C)

- Pilot lamp for indication of automatic (ventilation) mode will light up in the operational status display window of the product



2. It will operate only at Low air volume setting under automatic mode.

- Automatic (ventilation) mode will operate the product continuously in the 20-minute operation and 40-minute pause cycle.
- Product with built-in CO₂ (option) in and H control unit will operate automatically by the CO₂ concentration as follows.

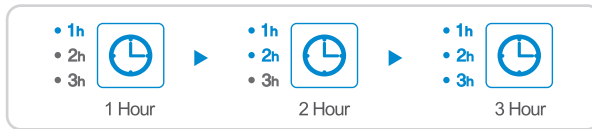
| Indoor CO ₂ concentration | 800 ~ 1,000ppm | 1,000 ~ 1,200ppm | More than 1,200ppm |
|--------------------------------------|----------------|------------------|--------------------|
| Air volume | Low | Midium | High |

※ Setting can be different depending on the composition of wireless and wired remote controller

○ Select reservation time

1. Set the reservation time by clicking UP (▲) and DOWN (▼) button in the reservation (Timer) of controller.

- Pilot lamp for reservation time will light up on the operational status display window of the product.
- Reservation time can be set in 1, 2 and 3 hour settings.
- When UP (▲) button is clicked, the time increase while clicking DOWN (▼) button will decrease time.
- Pilot lamp for reservation will light up in the operational status display window of the product according to the reservation time selected.



- Timer function will stop automatically once the set time has been lapsed.

○ Inspection alarm

1. When pilot lamp for inspection lights up at the top of the controller and operation stops, please contact the A/S Customer Center.

- If the power pilot lamp in the operational status display window flickers or if the product operation stops, please contact the A/S Customer Center.

2. If pilot lamp for cleaning or replacing filter lights up at the top of the remote controller, please inspect the filter.

- Filter inspection pilot light will flicker in the operational status display window for HRD-50C and 70C products (1,000 hours based on operational time)
- Bypass mode pilot light will flicker in the operational status display window for HRD-100C and 100C (DS) products (1,000 hours based on operational time)
- After checking the filter, pressing the filter button for more than 5 seconds while the product is turned off will deactivate the card-type remote controller.
- After checking the filter, pressing the mode button for more than 5 seconds while the product is turned off will release the H control unit.

※ You need to clean the free filter after 1,000 operational hours and replace the HEPA filter after 4,000 operational hours.

* You need to clean the free filter after 1,000 operational hours and replace the HEPA filter after 4,000 operational hours.

○ Exhaust (Bypass) mode: HRD-100C products

1. Select the exhaust (Bypass) operation by clicking the Mode button on the controller.

- Pilot lamp for Exhaust (Bypass) will light up on the operational status display window of the product.

2. When the product is in Exhaust (Bypass) mode, it will operate only in Low air volume mode.

3. When the Mode button is clicked again, the Exhaust (Bypass) mode will be cleared.

※ This product has dew prevention operation function during the winter seasons. As such, the operation or air volume control can be limited temporarily. (Operation of the equipment automatically stops at temperatures below -15oC.)



Warning

- Turn off the power prior to cleaning to ensure safety.
- Take precautions against falling at the time of inspection of enthalpic membrane heat exchanger and filter.

Warning

- Make sure to wear gloves when caring the product to ensure safety and hygiene.
- Cleaning a enthalpic membrane heat exchanger and filter with water is strictly prohibited.

Separation and cleaning filter

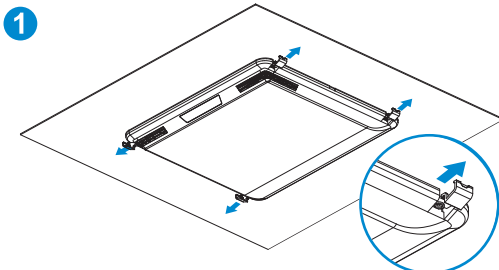
Regularly clean filter and electric thermal exchange element to prevent degradation of the functions of the ventilation system.

Cleaning and exchange interval

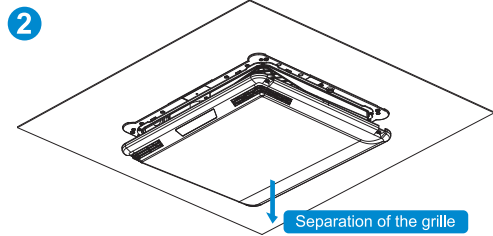
* Cleaning and exchange interval for filter and an enthalpic membrane heat exchanger can differ depending on the environment and management method.

- Time of cleaning filter and an enthalpic membrane heat exchanger : 1,000 hours of accumulated operation (about 3 months if used for 12 hours a day)
- Time of replacing filter: 4,000 hours of accumulated operation (about 10 months if used for 12 hours a day)
- Time of replacing an enthalpic membrane heat exchanger : 20,000 hours of accumulated operation (about 4 years if used for 12 hours a day)

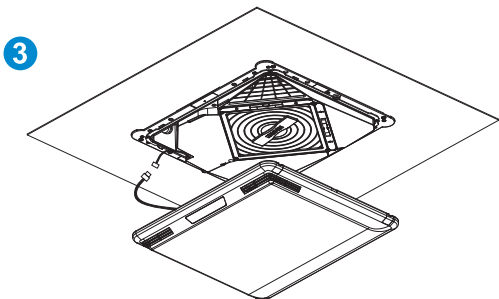
Separation of filter



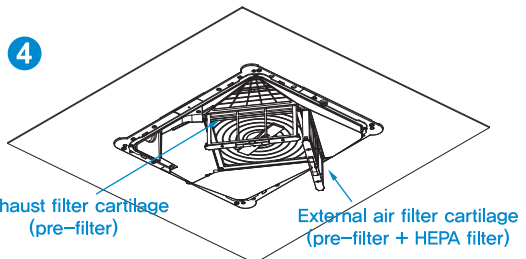
- Insert (-) screw driver into the lateral groove of the grill cap and flip upwards to separate 4 grille caps.
- Separate the 4 screws after having separate the grille caps.



- Separate the hook by pulling the grille downwards.
- Separate the grille from the main body by pulling it slowly downwards.



- Separate the operational status display window cable of the grille from the terminals of the main body.

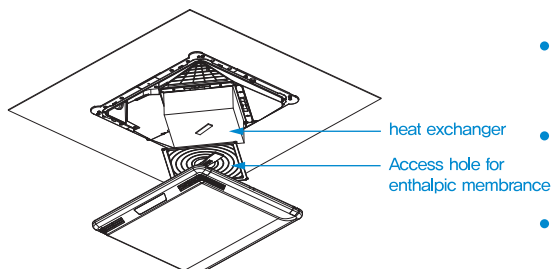


- Hold the handle of the exhaust filter and external air filter cartilages attached to the main body and pull downwards to detach them. (Do not exert excessive force at this time)

※ While the external air filter has filter cartilage (pre-filter) + HEPA filter installed, the exhaust filter has only filter cartilage (pre-filter) installed as the basic specifications.

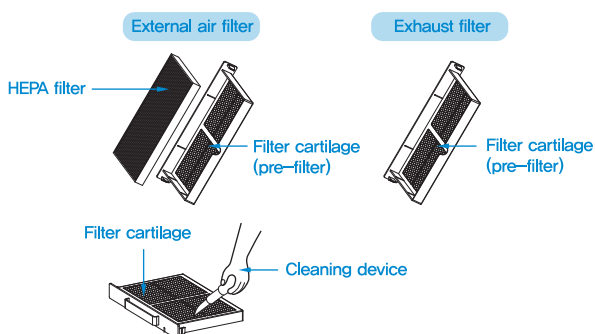


● Separation of an enthalpic membrane heat exchanger



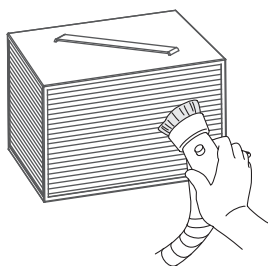
- Undo the 4 screws for the access hole for an enthalpic membrane heat exchanger in the main body.
(At this time, take precaution since the heat exchanger can become detached.)
- Open the inspection opening and grab the handle of an enthalpic membrane heat exchanger to separate it downward.
- Take precautions against falling at the time of separation of an enthalpic membrane heat exchanger.

● How to clean filter



- Separate the HEPA filter from the external air filter cartilage.
- Clean the filter cartilage by using cleaning device.
- Cleaning with water for filter cartilage and replacing of HEPA filter are recommended.
- Clean the filter at least once every 3~6 months to ensure the maintenance period of the product.
- Regularly clean and replace filter and electric thermal exchange element to prevent degradation in the performances of the product.

● Cleaning Heat exchanger.



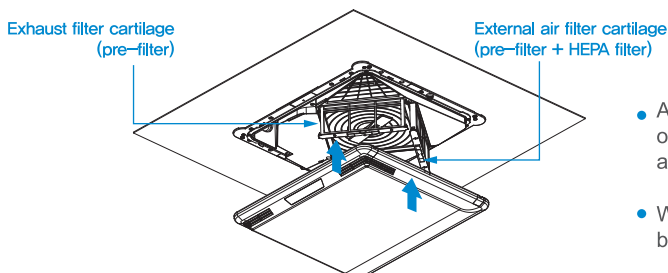
* Filter and an enthalpic membrane heat exchanger need to be cleaned regularly to prevent degradation of the functions of the equipment.

- Clean the dust off the surface of an enthalpic membrane heat exchanger in the direction of the grooves of the element by using vacuum cleaner.



1. Never wash the enthalpic membrane heat exchanger and HEPA filter with water.
2. Take precautions to ensure that the valley of the enthalpic membrane heat exchanger are not damaged during cleaning. (Damage to the grooves of the electric thermal exchange element can lead to degradation of the functions of the product.)

● Assembly and checking after cleaning



* Assemble the filter and enthalpic membrane heat exchanger in the reverse order of disassembly.

- At the time of assembly if filter, take precautions on the direction and location of the external air and exhaust filters.
- Wrong direction or location of the filters can become the cause of degradation of air volumes.



Issues to be checked before reporting breakdown

| Status | Cause | Measures to be taken |
|---|--|---|
| It does not operate | 1. Power blackout | Wait until the power supply resumes |
| | 2. Power switch is turned off | Check whether the pilot light for the power supply is on in the product status display window |
| Poor ventilation | Filter or heat exchanger is blocked | Clean filter or heat exchanger |
| Large noise | Filter or heat exchanger is blocked | Clean filter or heat exchanger |
| Product is turned on but does not operate | The outdoor temperature is very low (cold seasons) | The product is in frost prevention operation mode to protect the product. |
| The air volume automatically changes to low mode even if it is changed to other modes | The outdoor temperature is very low (cold seasons) | The product is in frost prevention operation mode to protect the product. |

* If the above measures cannot solve the problem, please make inquiries to the A/S Center.

Error Codes

If Error Code is indicated in the LCD window of controller, check the number and make inquiries to A/S Center.

- 02 – Temperature sensor error
- 06 – CO₂ sensor error
- 07 – Communication error
- 09 – Fan (motor) error



Product warranty



About our service

Himpel guarantees the quality of our product in accordance with the consumer injury compensation rule. Himpel or its designated affiliate will provide customer service when requested. Notification regarding the feasibility of the request will be sent to you within 7 days, and the compensation will be made within 14 days of the notification.

| | | | |
|----------------------|----------------|-------|--|
| Product name | | Model | |
| Date of purchase | Year/Month/Day | Price | |
| Location of purchase | | | |

Service

Our customers have the right to a free repair service for one year after the installation of the product if and when the product malfunctions. However, if the malfunction is due to the customer's mistake or due to natural disaster, the repair service will be provided at a cost even if it is within the warranted period.

The customer service cost consists of the engineering fee, part price, and traveling fee.

- The engineering fee refers to the part of cost that is required for the diagnosis of the malfunction, repair and exchange of the malfunctioning part, and for checking the operation of the machine after the repair/exchange of the unit.
- The part price refers to the part of cost that is required for the parts and auxiliary materials used for the repair of the unit.

The traveling fee refers to the part of cost that is necessary when the engineer is sent to the location of the unit per the customer's request

Free service

During the warranted period, repairing the unit or exchanging its parts will be done free of cost if the malfunction is due to the fault of the unit and not due to the negligence or error on the customer's part.

The warranted malfunction are as follows.

- If there is excessive noise due to the unbalance of the fan or other causes.
- If the set operation mode does not match the actual operation mode.
- If the fan does not operate when the power is correctly supplied.

Paid service

- If the customer independently disassembled the unit, causing the unit to malfunction.
- If the unit was damaged due to incorrect wiring
- Changing the Grille, filter and heat exchange element replacement
- Regular inspection and maintenance of the unit
- Careless handling

※Please keep it along the owner's manual as it will not be reissued.

Customer service : +82-31-424-8403

Head office : Annyeongnam-ro 8beon-gil 4, Hwaseong-si, Gyeonggi-do, Republic Korea

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HIMPSEL

HIMPSEL

Head office/Plant

Anyeongnam-ro 8beon-gil 4,
Hwaseong-si, Gyeonggi-do,
Republic of Korea